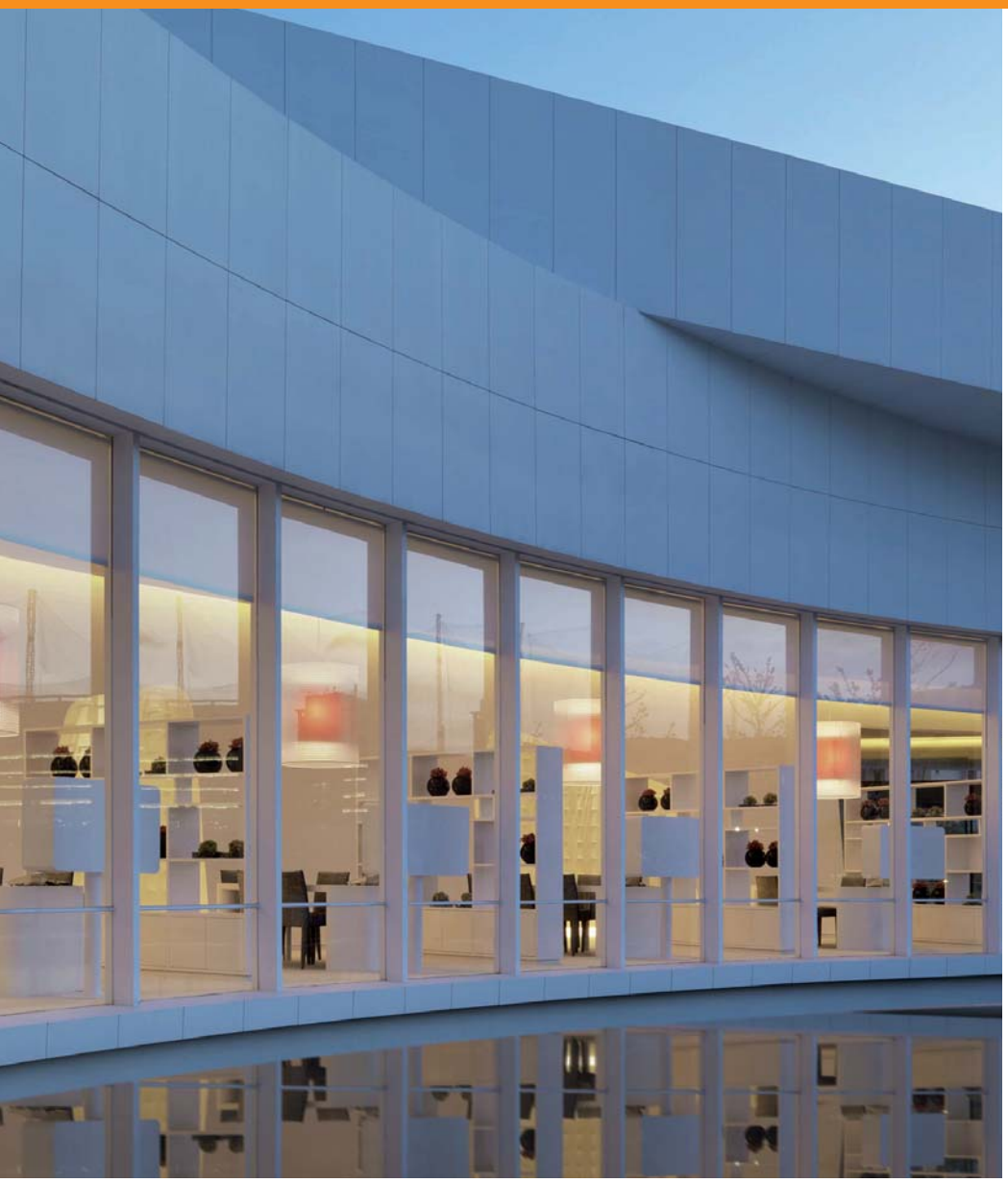
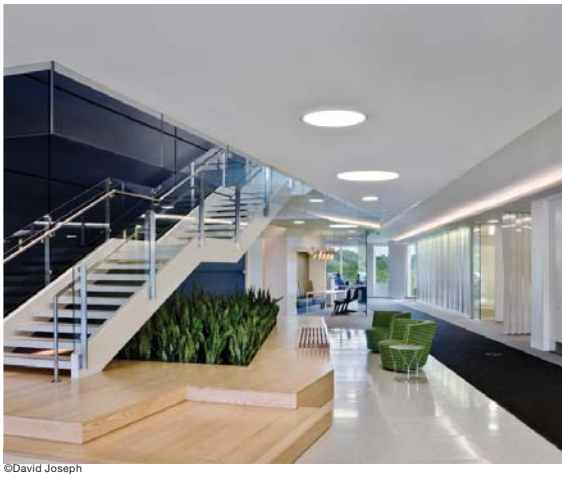
www.sylvania.com





©David Joseph

Lamp and Ballast Catalog

2013-2014

OSRAM SYLVANIA

OSRAM is proud to offer an innovative selection of advanced lighting technologies and energy-saving products, systems and services. Our products are marketed under our family of brands: OSRAM, SYLVANIA, Traxon & e:cue and ENCELIUM®.

Because our focus is on lighting, we provide the solutions that meet the needs of all our customers. Our products are designed to save energy, improve the quality of light and meet sustainability goals. The right lighting solution can make people more comfortable, more productive and feel safer. Whatever the need – from retail to entertainment lighting, depend on us for the ideal lighting solution to meet your requirements and to help make your company more efficient and productive.

Our Brands

Our family of brands:

OSRAM

OSRAM branded products are known worldwide for their high quality and advanced technology. Featuring energy-saving solutions for any application, the OSRAM brand is one of the most respected in lighting.

SYLVANIA

SYLVANIA branded products have signified lighting innovation for almost a century. Innovation, quality and dependability are why the SYLVANIA brand name is the name you can trust. The complete line of SYLVANIA products deliver unparalleled levels of performance to any modern lighting application.

traxon e:cue
AN OSRAM BUSINESS

The Traxon & e:cue portfolio of sustainable and reliable turnkey lighting solutions is designed to meet every demand. Traxon & e:cue LED lighting and control systems offer sophisticated RGB and white options for the architectural, hospitality, healthcare, retail and entertainment industries. These innovative solutions apply the benefits of LEDs as a highly-efficient, long-lasting and environmentally-safe light source by combining state-of-the-art technology with award-winning designs.

ENCELIUM

The ENCELIUM® brand and Energy Management System from OSRAM offers some of the most brilliant tactics in the industry to combat the problem of escalating energy costs. The solution was the Energy Management System (EMS), the most advanced lighting control solution on the market. EMS is an intelligent, integrated lighting control and energy management solution that uses the collaborative power of addressable networking technology in conjunction with advanced control hardware and software. Proven solutions have been utilized in hundreds of new and retrofitted buildings around the globe.

We are also proud to have two technologically-advanced businesses in our OSRAM family.

OSRAM Opto Semiconductors

OSRAM Opto Semiconductors, a subsidiary of OSRAM GmbH, is one of the key players in the global opto-electronic semiconductor market and one of the guiding lights in technological development and high-quality manufacturing. For four decades, the high-tech company has been investing in research and developing new products on the technological cutting edge – enabling OSRAM Opto Semiconductors, to set international standards in the fields of illumination, visualization and sensor technology.

SYLVANIA LIGHTING SERVICES

SYLVANIA Lighting Services (SLS), a subsidiary of OSRAM SYLVANIA, is the industry leader in turnkey energy-management solutions.

We help design a solution that includes energy saving products as well as the latest in lighting controls to reduce energy consumption and ultimately save you money. We provide audit and survey capabilities, lighting design and project management, utility rebate management, recycling, turnkey solutions for EV charging and more, all with one point of contact.

As our business partner, you will benefit from the strength of our company, the versatility of our brands and our commitment to cutting-edge lighting technologies. We provide customized solutions to help you achieve your objectives, thus strengthening your bottom line and improving the light around you.

Table of Contents

Important Notice

The data and suggested applications contained in this catalog, as well as any additional information our representatives may be able to furnish, are for general information only and are not intended and should not be taken as representations or warranties as to the suitability of a lamp for any particular application or use in any particular equipment, nor are our representatives authorized to make any such representations or give any such warranties. Applications and conditions of use are many and varied and beyond our control. We do not have the same degree of knowledge that the purchaser has with respect to the design of his equipment and the conditions of its use. Therefore, it is up to the purchaser to make his own determination as to the suitability of a lamp for his intended application or use and to assume responsibility for that determination.

The specifications and information shown in this catalog are believed to be accurate. Although OSRAM SYLVANIA believes this information to be correct, no warranty is made or implied as to the accuracy of this information and OSRAM SYLVANIA does not accept or assume responsibility of liability for errors, changes, omissions, or for harm resulting therefrom.

In accordance with our established policy to consistently improve our products, the specifications contained herein are subject to change without notice.

The OSRAM SYLVANIA Test and Measurement Laboratory is a participant in the Energy Efficient Lighting (EEL) Program of the National Voluntary Laboratory Accreditation Program (NVLAP-NIST) and is accredited for testing of lighting products according to the guidelines for the EEL Program. OSRAM SYLVANIA lamp and ballast measurements are conducted under laboratory conditions utilizing American National Standards Institute (ANSI), Canadian Standards Association (CSA), Commission Internationale de l'Eclairage (CIE), and Illuminating Engineering Society of North America (IESNA) standards and practices. The OSRAM SYLVANIA Electronic Component and Systems Development Group participate in the Underwriters Laboratories Inc. Client Test Data Program. Ballast designs are tested for conformance to Underwriters Laboratory (UL) safety standards using practices audited, assessed and approved by UL. Actual lamp and ballast performance may vary depending on application and environment (i.e. ambient temperature, input voltage, ballast type, etc.)

OSRAM SYLVANIA designs and manufactures lamps and ballasts to meet American National Standard Institutes (ANSI) and/or IEC (International Electrotechnical Commission) standards of construction and performance through Total Quality Manufacturing (TQM) practices where applicable. In addition, ballasts are designed and manufactured to meet Underwriters Laboratory (UL) and Canadian Standards Association (CSA) safety standards as necessary. Ratings may change as a result of changes made to remain compliant with modified or updated standards. OSRAM SYLVANIA will release new or updated technical bulletins when appropriate. All product data presented in this catalog supersedes all data published before 10/01/13.

Many OSRAM SYLVANIA products listed in this catalog qualify under the North American Free Trade Agreement (NAFTA) as manufactured in Canada, the United States of America or Mexico.

The Future of Lighting is Being Created Today at OSRAM SYLVANIA

Leading you into the future of light

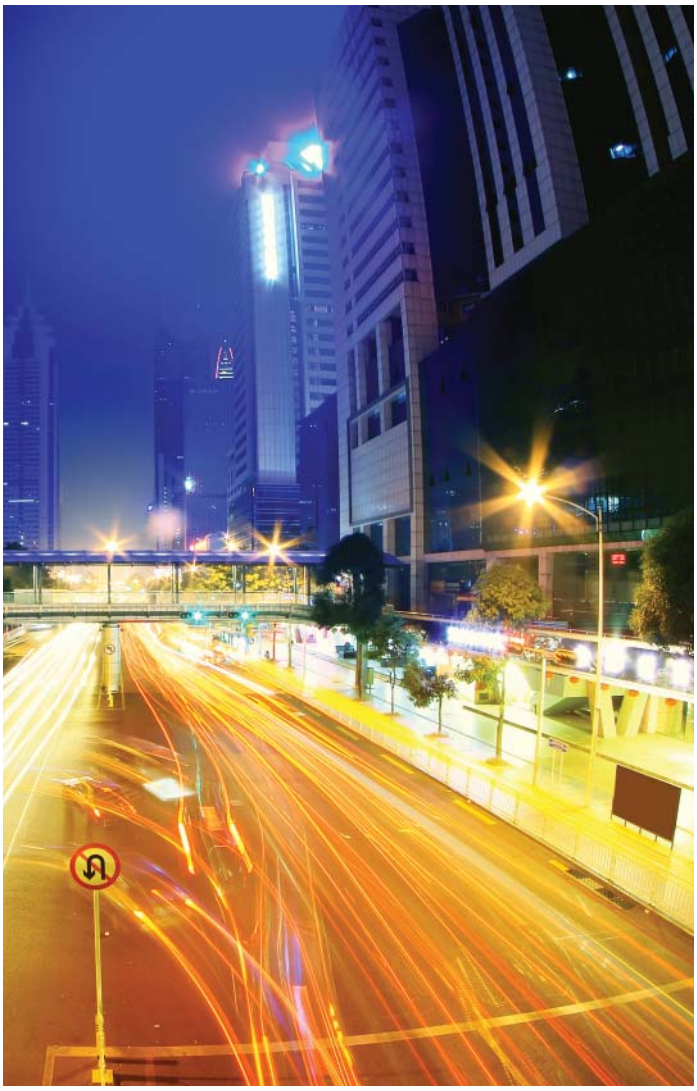
For over a century, OSRAM SYLVANIA has been a leader in introducing products that deliver energy savings, reduce impact on the environment and increase our customers' bottom line. We have consistently refined and improved our traditional lighting technologies, while embracing the challenge to explore and develop innovative products to meet future demands.

The integrated lighting expert

As an integrated lighting expert, we are number two among the global companies in the lighting market. We offer vertically integrated products and solutions along the entire lighting value chain from light sources – including lamps, components, and optical semiconductors – through ballasts and complete luminaires, light management systems, and value-added services.

Follow a leader in lighting innovation

Our innovative products are driven by unparalleled expertise in all facets of lighting science and technology, and by the highest levels of customer support and service. Let us show you how lighting behaves, how it motivates and how it influences our lives and our performance. Most importantly, let us show you how our experience in specification and application will ensure you get the best performance and ROI from our products. Look to OSRAM SYLVANIA to provide tomorrow's lighting solutions for today's lighting projects.



A Century of Illumination

OSRAM SYLVANIA's leadership in the industry results from our proud legacy, which extends back to the dawn of the twentieth century, and points the way for continued success in years to come.

We're proud of our long standing reputation of providing solutions in homes, businesses and institutions, automobiles and a broad range of specialty applications. Over the years we've changed to reflect the markets we serve and the customers we reach. But one thing has remained constant – a belief that our ideas can make a difference in every person's life and that our products reflect a commitment to making our world more comfortable, more productive and more imaginative.

1964 METALARC®

1972 LUMALUX®

1973 UNALUX®

1974 SUPERSAVER® T12

1981 OCTRON®

1982 DULUX®

1983 SUPERSAVER PLUS™

1984 LUMALUX ECOLOGIC®

1985 OCTRON CURVALUME®

1987 QUICKTRONIC® Systems

1992 METALARC PRO-TECH®

1995 LUMALUX PLUS®

1995 METALARC Pulse Start

1996 METALARC SUPERSAVER

1996 DULUX D ECOLOGIC

1997 ICETRON®

1997 PENTRON®

1997 PENTRON HO

1999 METALARC POWERBALL® Ceramic

2001 SUPER METALARC, OCTRON XP®, XPS® ECOLOGIC

2002 OCTRON SUPERSAVER ECOLOGIC

2005 PENTRON PREMIER™ ECOLOGIC

2005 QUICKTRONIC POWERSENSE® Dimming Ballast

2005 DULUX L SUPERSAVER ECOLOGIC

2008 QUICKTRONIC PowerSHED™

2008 LEDstixx® Lighting Systems

2009 METALARC POWERBALL EL ECOLOGIC

2009 OCTRON XP XL ECOLOGIC

2009 QUICKTRONIC High Efficiency Systems

2010 DULUX SUPERSAVER ECOLOGIC

2010 METALARC POWERBALL Ceramic 15W TF & QUICKTRONIC SUPER Mini System

2011 PENTRON HO XL ECOLOGIC

2011 QUICKTRONIC High Efficiency POWERSENSE Systems

2011 QUICKTRONIC Metal Halide Dimming Systems

2011 ProPoint® LED Outdoor Luminaires

2012 Ultra IQ™ LED Lamps with integrated wireless dimming

2012 Ultra SE™ LED Lamps with Sunset Effect

2013 OPTOTRONIC® Programmable Constant Current LED Power Supplies

2013 OCTRON® 800XP® XL Ecologic® 3 T8 Fluorescent Lamp

2013 OSRAM LED 1x4, 2x2, and 2x4 luminaires and retrofit solutions with integrated control options

2013 PermaLED™ LED Outdoor Luminaires

Living and Complying with Today's Lighting Regulations

OSRAM SYLVANIA is committed to the quality of our lighted environment. Our team of knowledgeable and dedicated individuals inform and represent the interests of the lighting community. Communicating government and industry activities that impact the art and science of lighting is critical to our customers' success. Throughout the year, documents are produced and presentations provided to help prepare for upcoming changes. A few of the key industry issues we are working on now are noted on the next page.

Efficacy standards and the phase-out of incandescent lamps

Although federal agencies may not currently use funds to enforce existing incandescent lamp legislation, all provisions of the law remain in effect.

Regulations

California was the first state to restrict standard 60 watt incandescent lamp sales on January 1, 2013 by mandating higher efficacy. Federal requirements for the 60 watt general service incandescent lamp take effect on January 1, 2014.

The California Title 24 energy code for buildings has just been revised, with an effective date of January 1, 2014.

A centerpiece of the revised regulations is controllable lighting. In most new or major retrofit non-residential interior spaces, dimmable lighting or multi-switched lighting will be required. The California Energy Commission has also adopted a voluntary lighting quality specification for LED replacement lamps. The new standard requires LED lamps to meet specific performance criteria to qualify for utility incentive programs.

DesignLights Consortium® (DLC)

The DLC is a collaboration of utility companies and regional energy efficiency organizations that qualifies LED lamps and luminaires for commercial lighting programs. Rebates are often dependent on the lighting product being on the qualified product list. In September of 2012, the DLC added 11 new categories of products that can be qualified for inclusion. Landscape and architectural flood and spot lighting, stairwell and passageway and 8 new retrofit kit categories were added. The retrofit categories now cover interior troffers, high bay and low bay, parking garage, wall-mounted types and more. There are almost 20,000 DLC qualified products.

Lighting Systems

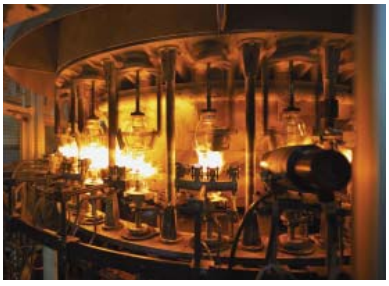
Regulations have favored efficiency levels for components. Conventional ballasts and lamps are mature technologies. Further efficiency restrictions on these will be incremental as our industry shifts to Solid State Lighting (SSL) for the promise of improved efficiencies. SSL is increasingly integrated with chips, drivers, sensors and controls merged together. Maximum efficiencies will be achieved by addressing lighting systems rather than components. Application based (retail, office, warehouse, etc.) standards such as ASHRAE/IES/ANSI 90.1 for lighting systems further refine the requirements and improve effectiveness by addressing specific building needs.

Made Here. Made Better.

ASSEMBLED IN USA

A substantial amount of OSRAM SYLVANIA products sold in NAFTA are assembled or made in the USA. SYLVANIA operates 8 manufacturing plants, 8 R&D labs, and an equipment assembly facility right here in the USA. OSRAM SYLVANIA offers a world of money saving opportunities that are made right here at home. When you partner with SYLVANIA, you'll receive the benefit of SYLVANIA Lighting Services, an industry leader in turnkey energy management solutions. We help design a solution that includes energy saving products as well as the latest in lighting controls to reduce energy consumption and ultimately save you money. As experts in LED lighting and design, we can help your company take full advantage of the latest technologies, which can be customized to your needs. The savings generated from SYLVANIA energy-efficient lighting systems will save you money today and in the years to come. This results in savings you can invest and use to stimulate your business even more.

Versailles, KY



Manchester, NH

OSRAM SYLVANIA Distinctions and Awards

At OSRAM SYLVANIA, our singular focus is on lighting excellence. You can see it in our products. Our innovative lighting products are driven by unparalleled expertise in all facets of lighting science and technology and, equally important, by the highest levels of customer support and service. We are proud the industry has recognized our efforts.

2013 *Today's Facility Manager*
Readers' Choice Award
OCTRON® XP® XL ECOLOGIC®3

2013 LIGHTFAIR Innovation Award
OCTRON 800 XP XL Lamp

Next Generation Luminaires Award
OSRAM RLC22 LED 2'x2' Luminaire

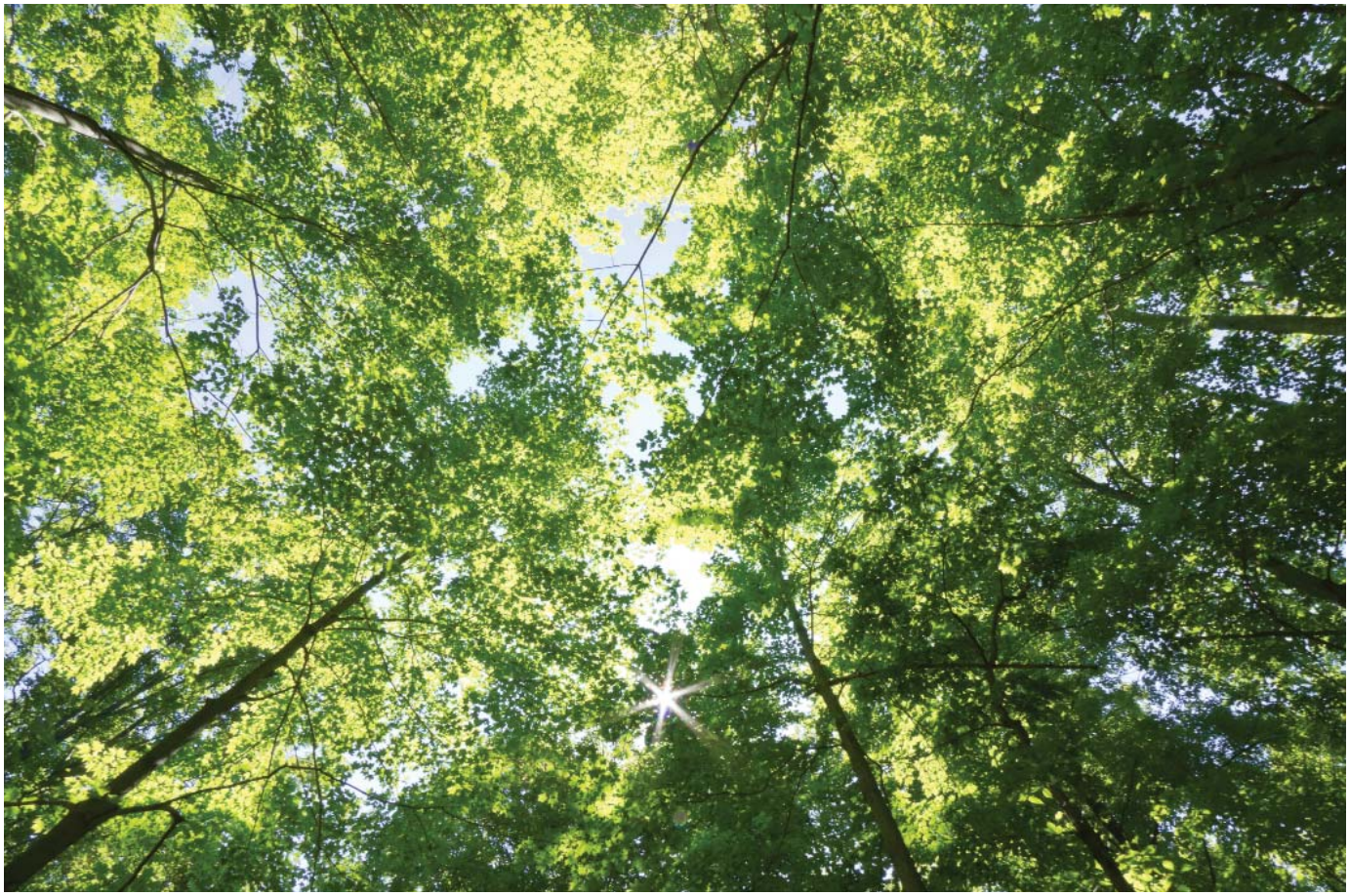
Red Dot Award
OSRAM KREIOS® G1 LED Image Projector

Lighting for Tomorrow
SYLVANIA ULTRA RT6 Gimbal LED
Recessed Downlight Kit

2013 Design Journal ADEX Awards
LINEARlight FLEX® Advanced LED
Linear Modules – PLATINUM
SYLVANIA ULTRA RT6 Gimbal LED Recessed
Downlight Kit – PLATINUM
EMerge Alliance Registered Version of
OSRAM RLC22 LED 2'x2' Luminaire – PLATINUM
QUICKTRONIC® POWERSENSE® T5HO – PLATINUM
ProPoint® Industrial Linear LED Luminaire – PLATINUM
OCTRON® 800 XP®XL ECOLOGIC®3 Lamps – PLATINUM
ULTRA LED PAR38 HO – GOLD
LINEARlight FLEX® POWER FLEX LED
Linear Modules – SILVER

2013 IES Progress Report

Architectural SSL PIA Award
Traxon Cove Light AC Dim



Sustainability is our continuing story, a long-standing practice that inspires our vision of the future and our progress as a company.

Global Care® represents OSRAM SYLVANIA's commitment to environmental and social responsibility.

Global Care

Global Care represents our commitment to social and environmental responsibility worldwide. As a leader in innovative lighting solutions, we are dedicated to products and processes that contribute to solving global sustainability challenges, address economic needs and protect the environment for today and for the future.

We are using fewer natural resources, saving energy for our customers, reducing our carbon footprint and facilitating the recycling of lamps and other materials to avoid millions of pounds of waste in landfills.

We intend to specifically address the risk that tantalum, tin, tungsten, and gold used in our products are potentially derived from conflict areas. Thus, we are committed to ensuring that the OSRAM supply chain will be “conflict-free”.

OSRAM SYLVANIA Leads Sustainability in Lighting

Recognized for our achievements:

20% absolute corporate greenhouse gas emissions reduction in 5 years (exceeded 10% goal)

12.5% product energy intensity reduction in 5 years

10-year ENERGY STAR® Partner of the Year

Member of National Clean Fleets Partnership

Member of USGBC since 2003

Member of EPA SmartWay™ Transport Partnership since 2008

Platinum Sponsor of Green Parking Council since 2012

US DOE Workplace Charging Challenge Partner

OSRAM SYLVANIA is a sustainability leader, focusing on reducing environmental impact of products and processes for our company and for our customers.

Lead-Free Manufacturing

- Fluorescent manufacturing in Versailles, Kentucky
- HID manufacturing in Manchester, New Hampshire
- Electronic ballast manufacturing

Made in the U.S.A.

- OSRAM SYLVANIA operates 12 manufacturing facilities in the United States
- All NAFTA facilities ISO 14001 certified

www.sylvania.com/sustainability

EMerge Alliance Partnership

Founding and governing member

Member since 2008

The Alliance is an open-industry association developing standards leading to the rapid adoption of DC power distribution in commercial buildings.

These innovative standards integrate interior infrastructures, power, controls and devices in a common microgrid platform to facilitate the hybrid use of AC and DC power throughout buildings for unprecedented design and space flexibility, greater energy efficiency and improved sustainability.

The Alliance will simplify and accelerate market adoption of EMerge Alliance standards and will ensure that its standards deliver:

- Required solutions based on market requirements and ecosystem approval
- Buyer assurance with products evaluated against our standards and registered for public view
- Increased supply choices in the value chain that spans the needs of different commercial interiors

EMerge Registered Products:

- RLC22/RLS22
- ENCELIUM® – ECU
- ENCELIUM – LCM
- OPTOTRONIC® OT DIM
- Pro-Flex LED Driver
- Exterior Light Engine
- HF²Chain LED Module
- HF²Narrow Stick LED Module

Applications:

- Commercial buildings
- Healthcare
- Office
- Retail

SYLVANIA Lighting Services

Solutions that lead to better lighting

SYLVANIA Lighting Services (SLS), a subsidiary of OSRAM SYLVANIA, is an industry leader in turnkey energy management solutions. We help design a solution that includes energy saving products as well as the latest in lighting controls to reduce energy consumption and ultimately save you money. As experts in LED lighting and design, we can help your company take full advantage of the latest technologies, which can be customized to your needs. SLS offers:

- Total turnkey lighting solutions
- Turnkey LED retrofit solutions
- Retrofit and relamp projects
- Energy and lighting audits
- National project management
- Financing programs
- One point of contact
- Utility rebate management
- Recycling/sustainability programs
- Complete energy-management solutions
- Lighting system controls integration and monitoring
- 24-hour bilingual customer service
- Turnkey solutions for electric vehicle charging stations

For more information, visit us at www.sylvania.com/sls

SYLVANIA and OSRAM Products and the IESNA Progress Report

A proud legacy of achievement

Each year, the Progress Committee of the Illuminating Engineering Society of North America (IESNA) solicits the lighting industry for product submissions. If accepted, these submissions are featured in the committee's Progress Report that is published in the IESNA's publication, *LD+A*. The mandate of the Progress Committee is "to keep in touch with developments in the art and science of lighting throughout the world and prepare a yearly review of achievements for the Illuminating Engineering Society of North America". Submissions are organized into one of seven categories: light source, accessory, luminaire, research, application, publication and design tool. They are evaluated for their design, engineering characteristics, installation features and overall uniqueness. The 30-member committee of industry experts votes on up to 200 product submissions annually.

Over the years, many SYLVANIA and OSRAM branded products have been accepted for the Progress Report. An itemized list of our products is included in the table that follows along with their significant features. For detailed descriptions and specifications, please visit www.SYLVANIA.com.

IESNA Progress Report
2013 Progress Report

OSRAM SYLVANIA LIGHTING SUBMISSIONS ACCEPTED BY THE IESNA PROGRESS Committee	SIGNIFICANCE TO THE LIGHTING INDUSTRY*
OCTRON® 800 XP® XL (eXtended Life) ECOLOGIC®3 T8	Up to 2.7x longer life than standard T8 lamps, up to 84,000 hours
LUMALUX PLUS XL	Extended life High Pressure Sodium; up to double life without sacrificing output (80,000 hours)
Nano Liner Allegro AC XB	Highest efficacy grazer in class, up to 84 LPW
Cove Light AC HO	Highest efficacy, lowest power density cove light
Butler PRO Engine	Scalable to run up to 250,000 DMX 512 channels
ALUCOBOND Media®	First media embedded aluminum cassettes facade cladding system
ULTRA SE™ Family (Sunset Effect - CCT Dim)	Line Extension of the BR30, A19, PAR30 lamps with CCT dimming; dims from 3000K to 2000K
ULTRA HO LED PAR38	LED PAR38 retrofit with highest CBCP
ULTRA LED PAR38 Free Form Lamps	First LED PAR38 with 90+ CRI and R9+50 for CA code
ULTRA HD LED Professional Lamp Series	Highest light output, efficacy and CRI in one product. CRI >90, R9>60, lamp is dimmable down to 10%
ULTRA 25™ LED Lamp Family	2500K CCT without sacrificing output; dimmed look without dimmer
ULTRA HO T8 LED Lamps and Retrofit Kits	Highest efficacy T8 LED Replacement lamp, 104-105 LPW, longest life, dimmable to 10%
ULTRA Light Disk	Highest lumen output, highest efficacy, retrofits down to 4" can
KREIOS® SL LED Set Light Fixture	Highest efficacy set light; equivalent to 250W halogen at only 60W; no fan required for cooling
OPTOTRONIC® Programmable Constant Current Dimmable	No AC line voltage to program the LED drivers, replaces multiple power supplies with one model
PermaLED™ Low Profile Canopy with integrated Controls	Highest efficacy with lowest profile, LED Garage/Canopy luminaire
LEDstixx® Lighting System for Horizontal Refrigeration	Industry highest efficacy luminaire for horizontal refrigeration applications
RLL Series LED Retrofit kits	Line extension to RLL22, 2x2 retrofit kit; 2x4 & 1x4 additions to the line; first 1x4 retrofit kit on the market
RLS22 – EMerge Alliance® Registered	First EMerge registered LED Ambient 2x2 fixture, high efficacy 95+ LPW
RLD6 Downlight	High efficacy LED Downlight with 45 degree cutoff
RLI22 Architectural Recessed LED Luminaires	First Indirect Optic LED recessed troffer, 90+LPW
ReliaSys™ D15 LED Retrofit Kit	First 400W MH retrofit kit; 140W, 103 LPW; life 2.5x life of MH
Industrial Linear LED Luminaire and Raceway	Line extension to Industrial Linear Luminaire with integrated raceway assembly with driver on board
MOSAIC® – Tablet Application	Voice activated control; choose from 16.7M colors on color wheel

*based on the 2013 IESNA Progress Committee Review

The QUICK 60+® System Warranty

It's the simple way to make sure you're completely covered. Just call 1-800-LIGHTBULB.

It starts with the ballast. When you purchase any QUICKTRONIC ballast, it's warranted for a period of up to 60 months. Then, when you add SYLVANIA lamps, you benefit from additional coverage for those lamps; that's the PLUS. More combinations and wider applications provide the broadest range of coverage available in the industry. Another benefit comes each time you group relamp, as the lamp portion of the warranty will extend for an additional term. In short, if you have SYLVANIA lamps and OSRAM ballasts, you're covered – it's that simple.

QUICK 60+ offers you a choice of three service options to resolve warranty claims for ballasts, including our unique "Fixtureside Assistance®" program from our own nationwide service organization, SYLVANIA Lighting Services. At our discretion we will dispatch a trained technician to make a service call to resolve any issues with our products. Our people taking care of our products ensure that you get the level of expert service you deserve. Of course, OSRAM SYLVANIA can also coordinate ballast replacement with an independent service provider, or you can manage the replacement yourself and we will determine labor reimbursement costs. OSRAM SYLVANIA will determine which options best suits your needs to make sure you are covered.

The QUICK 60+ warranty is simple to put to work. If you have OSRAM electronic ballasts and SYLVANIA lamps – you're covered. Just call 1-800-LIGHTBULB (1-800-544-4828) and request warranty service. Any installation of QUICKTRONIC ballasts and SYLVANIA brand lamps is covered by QUICK 60+ for periods defined in the warranty and by the date codes incorporated on all of our products. As an added value, by simply registering the installation, all warranty periods will be defined by the actual date of installation providing complete assurance that you'll recieve the coverage you deserve. If there's ever a problem, you won't have to look up old records and worry about who's responsible. It's that simple.

QUICK 60+®
Limited Warranty

Subject to change without notice.

The Heart of a Comprehensive System Service Program

Compare lighting system warranties – you'll see that our QUICK 60+ warranty offers better coverage, more service options and, more important, peace of mind.

Combination Lamp and Ballast System Limited Warranty

OSRAM SYLVANIA Inc. (OSRAM SYLVANIA) warrants SYLVANIA lamps installed on QUICKTRONIC® ballasts to be free from defects in material and workmanship and to operate from the date of installation (or date of manufacture if installation date is not known or available) for the time periods and subject to the Terms and Conditions specified below.

If lamps fail to operate for the warranty period, OSRAM SYLVANIA will provide a free replacement lamp (but no labor allowance). If a QUICKTRONIC ballast fails to operate within the warranty period, OSRAM SYLVANIA will provide a free replacement ballast and labor allowance in accordance with the "Labor Options" set forth below.

System[3,4,5]	Lamp	Ballast Warranty Period[8]	Lamp Warranty Period*
QUICKTRONIC T8[1]	OCTRON® Family[3]	60 mos.	30 mos.
QUICKTRONIC T8[1]	OCTRON XPS®, XP® & XP/SS, XPPLUS/SS[2,3]	60 mos.	36 mos.
QUICKTRONIC T8[1]	OCTRON XV™ & XV/SS[2,3]	60 mos.	36 mos.
QUICKTRONIC T8[1]	OCTRON XP/XL & XP/XL/SS Family[2,3]	60 mos.	60 mos.
QUICKTRONIC T8 High Ambient[1,9]	OCTRON XP, XP/SS[2,3]	36/60 mos.@<90°/70°C	36 mos.
QUICKTRONIC 59	OCTRON FO96/XP, XP/SS, XV & XV/SS[2,3]	60 mos.	30 mos.
QUICKTRONIC 59	OCTRON FO96[3]	60 mos.	24 mos.
QUICKTRONIC 86/T8HO High Ambient[1]	OCTRON FO96HO[3]	36/60 mos.@<90°/70°C	30 mos.
QUICKTRONIC T5, T5/HO[1]	PENTRON® Family[10]	60 mos.	24 mos.
QUICKTRONIC 54T5/HO[1]	PENTRON FP54/HO, FP54/C/HO, FP54/HO/SS	60 mos.	36 mos.
	PENTRON HO/XL	60 mos.	60 mos.
QUICKTRONIC 54T5HO High Ambient[1]	PENTRON FP54/HO, FP54/C/HO, FP54/HO/SS	36/60 mos.@<90°/70°C	36 mos.
	PENTRON HO/XL	36/60 mos.@<90°/70°C	60 mos.
QUICKTRONIC ICE[1,5]	ICETRON®	60 mos.	60 mos.
QUICKTRONIC 54PHO & DL40	DULUX® FT55DL, FT40DL & FT40DL/SS Family	60 mos.	24 mos.
QUICKTRONIC CF[1]	DULUX D/E, D/E/SS, T/E, T/E/IN, T/E/IN/SS T/E/C	60 mos.	24 mos.
QUICKTRONIC MH[7]	METALARC® Family[6] (7K-12K hrs. avg. rated life)	36/60 mos.	6 mos.
QUICKTRONIC MH[7]	METALARC Family[6] (15K-20K hrs. avg. rated life)	36/60 mos.	12 mos.
QUICKTRONIC HPS[7]	LUMALUX® Family[6] (≥30K hrs. avg. rated life)	36/60 mos.	24 mos
QUICKTRONIC 96IS/96HO & 40T12	N/A	60 mos.	N/A

*Note: Fluorescent lamp warranty periods are based on a 3 hour minimum cycle, unless otherwise noted, with a maximum of 4400 hours per year. Other operating cycles may affect warranty period. Lamp warranty can renew when installation is group relamped, contact OSRAM SYLVANIA for details.

1 Occupancy sensor application, 10 minute/start minimum, allowed with QUICKTRONIC PROStart® and with QUICKTRONIC ICE ballasts.
2 OCTRON SUPERSAVER® bi-pin lamps operate on many of our QUICKTRONIC® T8 electronic ballasts, see specs for details.
3 QUICKTRONIC, Professional Series and High Efficiency Series including all IS, PS & DIM models where applicable.
4 Labor options must be pre-approved by OSRAM SYLVANIA. Any labor option or cost that is not pre-approved will not be eligible for reimbursement.
5 QUICKTRONIC ballasts and ICETRON lamp warranty period allows up to 8760 hrs per year (continuous operation).
6 Contact OSRAM SYLVANIA for detailed specifications of METALARC and LUMALUX lamps.
7 QUICKTRONIC MH and HPS ballasts warranty is 36 or 60 months, depending on maximum case temperature. Refer to product specifications for details. Electronic HID system warranty period is based on a minimum cycle of 10hr/start up to a maximum operation of 6,000 hours/year.
8 Maximum Case Temp. <70°C, for normal environmental operating conditions (40°C max. ambient) unless noted. Refer to product specifications for details.
9 QUICKTRONIC T8 High Ambient (HT) Series
10 PENTRON 14, 21, 28 and 35W and PENTRON HO 24, 39 and 80W.

TERMS AND CONDITIONS

SYLVANIA lamps and QUICKTRONIC ballasts must be installed together as a system and be installed and operated under suitable environmental conditions and in accordance with the latest National Electrical Code, Underwriters Laboratory Bulletins, and ANSI Specifications. **This warranty will not apply in the event of conditions demonstrating abnormal use or stress, such as operating temperatures in excess of maximum rated temperatures, under/over voltage conditions, excessive switching cycles (see above Note #1) or operating hours, dirty or cracked sockets, or improper lamp or ballast installation.** Replacement of SYLVANIA lamps with lamps of other manufacturers will void the lamp portion of this warranty. Replacement of the QUICKTRONIC ballast with any other ballast will void the entire warranty.

WARRANTY ACTIVATION / SERVICE CLAIMS

The QUICK 60+ warranty is automatically activated after OSRAM SYLVANIA receives a completed QUICK 60+ warranty registration form within 30 days after installation. An acknowledgment will be sent for each registration along with a reference number for future correspondence. Service claims can be made by contacting 1-800-654-0089 to initiate the process for problem resolution.

LABOR OPTIONS (Ballast only and ICETRON lamps only)

No labor allowance is made for any lamp replacement except ICETRON, during the warranty period. OSRAM SYLVANIA will provide one of the following labor options for service under the QUICK 60+ warranty program, at OSRAM SYLVANIA's discretion.

1. OSRAM SYLVANIA will contact a service provider and coordinate replacement at no cost to the user of the ballast, or
2. OSRAM SYLVANIA will reimburse the purchaser reasonable, customary and necessary labor charges required to install the ballast replacement.
3. Labor options must be pre-approved by OSRAM SYLVANIA. Any labor option or cost that is not pre-approved will not be eligible for reimbursement.

RETURN OF DEFECTIVE PRODUCT

After contacting OSRAM SYLVANIA and receiving a RETURN MATERIAL AUTHORIZATION NUMBER, the user shall promptly return the product at the user's expense to OSRAM SYLVANIA after receiving instructions as to if, when and where to ship product. Failure to follow this procedure shall void this warranty.

REPLACEMENT OF PRODUCT, LIMITS OF LIABILITY

The foregoing shall constitute the sole and exclusive remedy of the purchaser and the sole and exclusive liability of OSRAM SYLVANIA. NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE OR IS TO BE IMPLIED. OSRAM SYLVANIA will not, under any circumstance, whether as a result of breach of contract or warranty, tort, or otherwise, be liable for any incidental, special or consequential damages, including lost profits or revenues or any other costs or damages.

OSRAM SYLVANIA reserves the right to examine all failed lamps and/or ballasts and reserves the right to be the sole judge as to whether any lamps and/or ballasts are defective and covered under this warranty.

QUESTIONS? Please call customer service at 1-800-654-0089 or contact your local OSRAM SYLVANIA representative.

SYLVANIA

ECS140R12 10-13

Warranties

More systems covered. More service options. More peace of mind.

ENCELIUM Standard Limited Warranty

Fluorescent Lamp Only Warranty

HID Magnetic System Warranty

HID Standard Lamp Warranty

Indoor Commercial Luminaire Warranty

LED Module and OPTOTRONIC® Power Supply or Control Warranty

LED Outdoor Fixture Warranty

LED Post Top Retrofit Warranty

LED Recessed Downlight Kit Limited Warranty

LED Signage System Warranty

LED System Warranty

LED T8 Replacement Lamp Warranty

LED Lamp Warranty

LEDstixx® Lighting System Warranty

Magnetic Ballast Warranty

OPTOTRONIC Programmable LED Power Supplies Warranty

QUICK 60+® Lamp or Ballast Warranty

ULTRA RT4 and RT6 Warranty

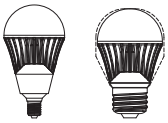
For additional information and full warranty listing visit **www.SYLVANIA.com/warranty**

LED

Table of Contents

LED LAMP SHAPES

A bulb designation consists of a letter(s) to indicate the shape and a figure to indicate the approximate major diameter in eighths of an inch. For example, an A19 bulb is an Aline, 19/8 of an inch in diameter.


A15


A19


A21

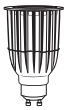

Aline


R20

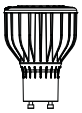

BR30

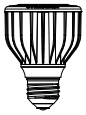

BR30


BR40


PAR16


PAR16


PAR20


PAR20


PAR20


PAR30


PAR30


PAR30


PAR30LN


PAR38

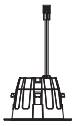

PAR38


MR16


B10

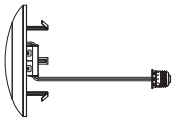

B13


G25


RT4


RT6

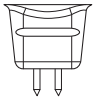

T8 Tube


Light Disk

BASE IDENTIFICATION

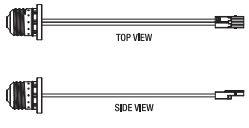

Med Base


Candelabra


GU5.3


GU10


GU24



Medium Adaptor

HOW TO READ PRODUCT INFORMATION – LED

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle (deg)	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes

Base	See page 2 Base Identification
Notes	All notes that apply to a specific product will appear in this space. The explanations of the notes are at the end of the LED section.
Ordering Abbreviation	A text description of the lamp. See below for several examples and explanations of some of the codes
Lumens, Beam Angle, CBCP	These columns may contain data for any of these values.

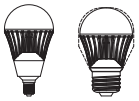
HOW TO READ ORDERING ABBREVIATIONS

LED12A19/DIM/O/827	
LED	Lamp technology
12	Nominal wattage
A19	Lamp shape
DIM	Dimmable
O	Omnidirectional
827	CRI: 80+; Color temperature 2700K

LED13PAR30LN/DIM/827/ FL40	
LED	Lamp technology
13	Nominal wattage
PAR30LN	Lamp shape
DIM	Dimmable
827	CRI: 80+; Color temperature 2700K
FL40	Flood 40°

LED/RT6/700/827/FL80	
LED	Lamp technology
RT6	Retrofit 6” housing
700	Lumen output
827	CRI: 80+; Color temperature 2700K
FL80	Flood 80°

LED/1400/RT6/835/FL80/WRFL/WTR	
LED	Lamp technology
1400	Lumen output
RT6	Retrofit 6” housing
835	CRI: 80+; Color temperature 3500K
WRFL	White reflector
WTR	White trim


A15


A19


A21


Aline


R20

GENERAL PURPOSE ULTRA LED LAMPS

ULTRA A-15 LED Fan Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Lamp Finish	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
8	3.5	Medium	78883	LED8A15/DIM/827	6	Clear	25000	2700 83	450	22.8	$0.96	I/O,2,4,5,6
8	3.5	Candelabra	78884	LED8A15C/DIM/827	6	Clear	25000	2700 83	450	22.8	$0.96	I/O,2,4,5,6

SYLVANIA A-19 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Lamp Finish	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
6	4.42	Medium	72552	LED6A19/F/827	6	Frosted	25000	2700 82	450	22.8	$0.72	I/O,2,5,6
			72553	LED6A19/F/850	6	Frosted	25000	5000 85	450	22.8	$0.00	I/O,2,5,6
10	4.42	Medium	72554	LED10A19/F/827/RP	6	Frosted	25000	2700 80	820	22.8	$1.20	I/O,2,5,6
			72555	LED10A19/F/850/RP	6	Frosted	25000	5000 85	800	22.8	$1.20	I/O,2,5,6

ULTRA Omnidirectional A-19/A-21 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Lamp Finish	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
8	4.42	Medium	78935	LED8A19/DIM/O/827	6	Frosted	25000	2700 80	470	22.8	$0.96	1,2,4,5,6,*
12	4.42	Medium	78907	LED12A19/DIM/O/827	6	Frosted	25000	2700 80	820	22.8	$1.45	1,2,4,5,6,*
14	4.42	Medium	78911	LED14A19/DIM/O/827	6	Frosted	25000	2700 80	1100	22.8	$1.69	1,2,4,5,6
20	5.29	Medium	78951	LED20A21/DIM/O/827	6	Frosted	25000	2700 81	1675	22.8	$2.41	1,2,4,5,6

DIRECTIONAL ULTRA LED LAMPS

ULTRA R20 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam angle (deg)	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
6	3.6	Medium	78489	LED6R20DIM827	6	90	25000	2700 80	350	22.8	$0.72	1,2,4,5,6,7,*

[1]Life in Years Based on 3 hours per day
[2]Cost per year based on 3 hours per day, $0.11 per kWh

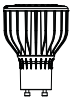

BR30


BR30


BR40


PAR16


PAR16


PAR20


PAR20


PAR20

DIRECTIONAL ULTRA LED LAMPS (CONT.)

ULTRA BR30 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle (deg)	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
12	4.8	Medium	78917	LED12BR30/DIM/827	6	100	25000	2700 80	620	22.8	$1.45	1,2,4,5,6,7,*
12	5.3	Medium	78014	LED12BR30/DIM/HO/827	6	100	25000	2700 82	850	22.8	$1.45	2,4,5,6,7

ULTRA BR40 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle (deg)	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
16	6.3	Medium	78627	LED16BR40/DIM/825	6	100	25000	2500 80	1000	22.8	$1.93	I/O,2,4,5,6,7

ULTRA PAR16 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle (deg)	CBCP	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
7	2.3	GU10	78964	LED7PAR16/DIM/GU10/830/FL36	6	36	650	25000	3000 84	350	22.8	$0.84	I/O,2,4,5,6
7	3	Medium	78965	LED7PAR16/DIM/830/FL36	6	36	650	25000	3000 84	350	22.8	$0.84	I/O,2,4,5,6
10	3.4	GU10	78896	LED10PAR16/GU10/DIM/830/FL35	6	35	1290	25000 80	3000	500	22.8	$1.20	I/O,2,4,5,6
10	3.4	Medium	78895	LED10PAR16/DIM/830/FL35	6	35	1290	25000	3000 80	500	22.8	$1.20	I/O,2,4,5,6

ULTRA & ULTRA HD (95 CRI, R9>60) PAR20 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle (deg)	CBCP	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
8	3.42	Medium	78425	LED8PAR20/DIM/H/827/NFL25	6	25	1700	25000	2700 82	450	22.8	$0.96	I/O,2,4,5,6,10,*
			78426	LED8PAR20/DIM/H/827/FL36	6	36	900	25000	2700 82	450	22.8	$0.96	I/O,2,4,5,6,10,*
			78427	LED8PAR20/DIM/H/830/NFL25	6	25	1900	25000	3000 82	450	22.8	$0.96	I/O,2,4,5,6,10,*
			78428	LED8PAR20/DIM/H/830/FL36	6	36	1000	25000	3000 82	450	22.8	$0.96	I/O,2,4,5,6,10,*
10	3.42	Medium	78963	LED10PAR20/DIM/825/WSP20/SG	6	20	2200	25000	2500 80	550	22.8	$1.20	I/O,2,4,5,6,10
			78748	LED10PAR20/DIM/P/930/FL30	6	30	1600	25000	3000 95	550	22.8	$1.20	I/O,3,4,5,6,7,*
10	3.5	GU24 Bi-Pin	78744	LED10PAR20/DIM/P/GU24/930/FL30	6	30	1600	25000	3000 95	550	22.8	$1.20	I/O,3,4,5,6,7,*

[1]Life in Years Based on 3 hours per day
[2]Cost per year based on 3 hours per day, $0.11 per kWh


PAR30LN


PAR30


PAR30


PAR30


PAR38

DIRECTIONAL ULTRA LED LAMPS (CONT.)

ULTRA and ULTRA HD (95 CRI, R9>60) PAR30 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle (deg)	CBCP	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
10	3.75	Medium	78662	LED10PAR30/DIM/SG/827/SP10	6	10	11000	25000	2700 89	510	22.8	$1.20	I/O,2,4,5,6,7,*
			78664	LED10PAR30/DIM/SG/830/SP10	6	10	12000	50000	3000 89	550	45.7	$1.20	I/O,2,4,5,6,7,*
			78576	LED10PAR30/DIM/SG/827/WSP15	6	15	5000	50000	2700 89	510	45.7	$1.20	I/O,2,4,5,6,7,*
			78665	LED10PAR30/DIM/830/SG/WSP15	6	15	5400	50000	3000 89	550	45.7	$1.20	I/O,2,4,5,6,7,*
			78663	LED10PAR30/DIM/SG/827/NFL25	6	25	2300	25000	2700 89	510	22.8	$1.20	I/O,2,4,5,6,7,*
			78666	LED10PAR30/DIM/SG/830/NFL25	6	25	2500	50000	3000 89	550	45.7	$1.20	I/O,2,4,5,6,7,*
13	4.56	Medium	78431	LED13PAR30LN/DIM/827/NFL25	6	25	3400	25000	2700 81	790	22.8	$1.57	I/O,2,4,5,6,7,*
			78429	LED13PAR30LN/DIM/830/NFL25	6	25	3600	25000	3000 82	820	22.8	$1.57	I/O,2,4,5,6,7,*
			78432	LED13PAR30LN/DIM/827/FL40	6	40	1400	25000	2700 81	790	22.8	$1.57	I/O,2,4,5,6,7,*
			78430	LED13PAR30LN/DIM/830/FL40	6	40	1450	25000	3000 82	820	22.8	$1.57	I/O,2,4,5,6,7,*
15	3.53	Medium	78747	LED15PAR30/DIM/P/930/FL40	6	40	1700	50000	3000 95	880	45.7	$1.81	I/O,3,4,5,6,7,*
15	3.6	GU24 Bi-Pin	78743	LED15PAR30/DIM/P/GU24/930/FL40	6	40	1700	50000	3000 95	880	45.7	$1.81	I/O,3,4,5,6,7,*

ULTRA HD (95 CRI, R9>60) PAR30LN LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle (deg)	CBCP	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
17	4.67	Medium	78746	LED17PAR30LN/DIM/P/930/NFL25	6	25	3400	50000	3000 95	970	45.7	$2.05	I/O,3,4,5,6,7,*
			78758	LED17PAR30LN/DIM/P/930/FL40	6	40	1600	25000	3000 95	970	22.8	$2.05	I/O,3,4,5,6,7
17	4.72	GU24 Bi-Pin	78742	LED17PAR30LN/DIM/P/GU24/930/NFL25	6	25	3400	50000	3000 95	970	45.7	$2.05	I/O,3,4,5,6,7,*

ULTRA, ULTRA SE™ (CCT dimming) and ULTRA HD (95 CRI, R9>60) PAR38 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle (deg)	CBCP	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
10	5.04	Medium	78735	LED10PAR38/SG/830/WSP15	6	15	6900	50000	3000 82	640	45.7	$1.20	I/O,2,5,6,7,*
15	5.04	Medium	78719	LED15PAR38/SG/827/WSP15	6	15	7000	50000	2700 89	700	45.7	$1.81	I/O,2,5,6,7,*
			78957	LED15PAR38/SGHO/830/SP10	6	10	26000	25000	3000 82	1050	22.8	$1.81	I/O,2,5,6,7

[1]Life in Years Based on 3 hours per day
[2]Cost per year based on 3 hours per day, $0.11 per kWh


PAR38


PAR38


MR16

ULTRA, ULTRA SE (CCT dimming) and ULTRA HD (95 CRI, R9>60) PAR38 LED Lamps (120V) (cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle (deg)	CBCP	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
15	5.04	Medium	78796	LED15PAR38/SG/830/SP10	6	10	16000	50000	3000 89	760	45.7	$1.81	I/O,2,5,6,7,*
			78498	LED15PAR38/SG/830/WSP15	6	15	7500	50000	3000 89	760	45.7	$1.81	I/O,2,5,6,7,*
			78958	LED15PAR38/SGHO/830/NFL25	6	25	5000	25000	3000 82	1050	22.8	$1.81	I/O,2,5,6,7
16	5.12	Medium	78435	LED16PAR38/DIM/827/NFL25	6	25	4300	25000	2700 81	950	22.8	$1.93	I/O,2,4,5,6,7,*
			78436	LED16PAR38/DIM/827/FL40	6	40	1680	25000	2700 81	950	22.8	$1.93	I/O,2,4,5,6,7,*
			78433	LED16PAR38/DIM/830/NFL25	6	25	4500	25000	3000 82	1000	22.8	$1.93	I/O,2,4,5,6,7,*
			78956	LED16PAR38/SE/830/FL30	6	30	3100	25000	3000 85	950	22.8	$1.93	I/O,2,4,5,6,7
			78434	LED16PAR38/DIM/830/FL40	6	40	1745	25000	3000 82	1000	22.8	$1.93	I/O,2,4,5,6,7,*
20	4.99	Medium	78904	LED20PAR38/DIM/P/927/WSP12	6	12	14000	25000	2700 95	1000	22.8	$2.41	I/O,3,4,5,6,7
			78906	LED20PAR38/DIM/P/930/WSP12	6	12	18000	25000	3000 95	1050	22.8	$2.41	I/O,3,4,5,6,7
20	5.12	Medium	78207	LED20PAR38/DIM/830/FL40	6	40	2500	25000	3000 82	1300	22.8	$2.41	I/O,2,4,5,6,7
21	4.99	Medium	78745	LED21PAR38/DIM/P/930/FL30	6	30	3700	50000	3000 95	1150	45.7	$2.53	I/O,3,4,5,6,7,*
21	5.03	GU24 Bi-Pin	78741	LED21PAR38/GU24/DIM/P/930/NFL30	6	30	3700	25000	3000 95	1150	22.8	$2.53	I/O,3,4,5,6,7,*

ULTRA MR16 Low voltage (12V) LED Lamps

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle (deg)	CBCP	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
6	2	GU5.3 Bi-Pin	78423	LED6MR16/DIM/827/NFL25	6	25	1100	25000	2700 83	350	22.8	$0.72	I/O,2,4,5,6,9,10
			78424	LED6MR16/DIM/827/FL36	6	36	700	25000	2700 83	350	22.8	$0.72	I/O,2,4,5,6,9,10
			78421	LED6MR16/DIM/830/NFL25	6	25	1300	25000	3000 85	350	22.8	$0.72	I/O,2,4,5,6,9,10
			78422	LED6MR16/DIM/830/FL36	6	36	730	25000	3000 85	350	22.8	$0.72	I/O,2,4,5,6,9,10
7	2	GU5.3 Bi-Pin	78210	LED7MR16/DIM/825/NFL25	6	25	1850	25000	2500 80	500	22.8	$0.84	I/O,2,4,5,6,9,10
			78420	LED7MR16/DIM/830/NFL25	6	25	2340	25000	3000 82	525	22.8	$0.84	I/O,2,4,5,6,9,10

[1]Life in Years Based on 3 hours per day
[2]Cost per year based on 3 hours per day, $0.11 per kWh

Notes on page 12


B10


B13


G25

DECORATIVE ULTRA LED LAMPS

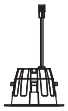
ULTRA B10/B13 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Lamp Finish	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
4	4.09	Candelabra	78888	LED4B10C/BLUNT/DIM/725	6	Clear	15000	2500 78	200	2.3	$0.48	2,4,5
			78812	LED4B10C/BLUNT/DIM/827	6	Clear	15000	2700 80	200	2.5	$0.48	2,4,5
4	4.09	Medium	78890	LED4B10/BLUNT/DIM/827	6	Clear	15000	2700 80	200	2.5	$0.48	2,4,5
4	4.09	Medium	78892	LED4B10/BLUNT/DIM/725	6	Clear	15000	2500 78	200	2.3	$0.48	2,4,5
6	4.72	Candelabra	78007	LED6B13C/BLUNT/DIM/825	6	Clear	15000	2500 80	330	2.3	$0.72	2,4,5
			78881	LED6B13C/BLUNT/DIM/827	6	Clear	15000	2700 80	350	2.5	$0.72	2,4,5
6	4.72	Medium	78008	LED6B13/BLUNT/DIM/825	6	Clear	15000	2500 80	330	2.3	$0.72	2,4,5
			78901	LED6B13/BLUNT/DIM/827	6	Clear	15000	2700 80	350	2.5	$0.72	2,4,5

ULTRA G25 LED Lamps (120V)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Lamp Finish	Average Rated Life (hrs)	CCT (K) CRI	Approx. Initial Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
7	4.7	Medium	78419	LED7G25DIMF827	6	Frosted	25000	2700 85	420	2.5	$0.84	2,4,5,6
			78418	LED7G25DIMF830	6	Frosted	25000	3000 85	440	2.7	$0.84	2,4,5,6

[1]Life in Years Based on 3 hours per day
[2]Cost per year based on 3 hours per day, $0.11 per kWh



RT4

RT6

ULTRA RECESSED LED DOWNLIGHT KITS

ULTRA RT4 LED (120V)

Retrofit for Standard four inch Insulated Ceiling, Airtight, and non-IC downlight housings

Nominal Wattage	Max. Depth (in)	Max. Diameter (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle	Voltage	Average Rated Life (hrs)	CCT	CRI	Approx. Initial Lumens at 25ºC/77ºF	Trim Color	Notes
9	3.18	5.04	Med Adaptor	70459	LED/RT4/600/827/FL80	2	80	120	50000	2700	82	600	white	UCL,2,4,5,*
				70643	LED/RT4/600/830/FL80	2	80	120	50000	3000	85	600	white	UCL,2,4,5,*

ULTRA RT6 LED (120V)

Retrofit for Standard six inch Insulated Ceiling, Airtight, and non-IC downlight housings

Nominal Wattage	Max. Depth (in)	Max. Diameter (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle	Voltage	Average Rated Life (hrs)	CCT	CRI	Approx. Initial Lumens at 25ºC/77ºF	Trim Color	Notes
10	4.43	7.37	Med Adaptor	70699	LED/RT6/700/827/FL80	2	80	120	50000	2700	83	700	white	UCL,2,4,5,*
				71707	LED/RT6/700/830/FL80	2	80	120	50000	3000	84	700	white	UCL,2,4,5,*
13	4.43	7.37	Med Adaptor	72332	LED/RT6/900/827/FL80	2	80	120	50000	2700	82	900	white	UCL,2,4,5,*
				72333	LED/RT6/900/830/FL80	2	80	120	50000	3000	84	900	white	UCL,2,4,5,*

ULTRA RT6 Gimbal LED (30° Tilt, 120V)

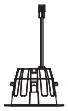
Retrofit for Standard six inch Insulated Ceiling, Airtight, and non-IC downlight housings

Nominal Wattage	Max. Depth (in)	Max. Diameter (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle	Voltage	Average Rated Life (hrs)	CCT	CRI	Approx. Initial Lumens at 25ºC/77ºF	Trim Color	Notes
15	4.43	7.37	Med Adaptor	70705	LED/900/RT6/G/830/FL80/WRFL/WTR	2	80	120	50000	3000	84	900	white	UCL,2,4,5,*
				70706	LED/900/RT6/G/827/FL80/WRFL/WTR	2	80	120	50000	2700	84	900	white	UCL,2,4,5,*

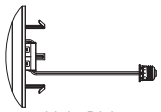
ULTRA HO RT6 LED (120V)

Retrofit for Standard six inch Insulated Ceiling, Airtight, and non-IC downlight housings

Nominal Wattage	Max. Depth (in)	Max. Diameter (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle	Voltage	Average Rated Life (hrs)	CCT	CRI	Approx. Initial Lumens at 25ºC/77ºF	Trim Color	Notes
21	4.43	7.37	Med Adaptor	70726	LED/1400/RT6/827/FL80/WRFL/WTR	2	80	120	50000	2700	85	1400	white	1,2,4,5,8,*
				70727	LED/1400/RT6/830/FL80/WRFL/WTR	2	80	120	50000	3000	85	1400	white	1,2,4,5,8,*
				70728	LED/1400/RT6/835/FL80/WRFL/WTR	2	80	120	50000	3500	85	1400	white	1,2,4,5,8,*


RT4


RT6


Light Disk

ULTRA RECESSED LED DOWNLIGHT KITS (CONT.)

ULTRA Light Disk (120V)

Surface mountable or Retrofit for Standard four, five and six inch Insulated Ceiling, Airtight, and non-IC downlight housings

Nominal Wattage	Max. Depth (in)	Max. Diameter (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Angle	Voltage	Average Rated Life (hrs)	CCT	CRI	Approx. Initial Lumens at 25ºC/77ºF	Trim Color	Notes
13	2.82	7.34	Med Adaptor	71911	LED/900/LD/830/FL120	2	120	120	35000	3000	82	900	white	1,2,4,5,*

Accessories for the ULTRA RT4

	Product Number	Ordering Abbreviation	Description
	75105	LED/ADAPTOR/GU24	GU24 Socket Adaptor
	75107	LED/ADAPTOR/PUSHWIRE	Push Wire Adaptor
	70696	RT4/TRIM/BLK	One Tone: Black Trim & Black Reflector
	70697	RT4/TRIM/ORBZ	One Tone: Bronze Trim & Bronze Reflector
	70698	RT4/TRIM/SN	One Tone: Satin Nickel Trim & Satin Nickel Reflector

Accessories for ULTRA RT6

	Product Number	Ordering Abbreviation	Description
	75105	LED/ADAPTOR/GU24	Socket Adaptor - for Non-Gimbal
	70650	LED/CRT6/GU24/SOCKET/ADAPTOR	Socket Adaptor - for Gimbal only
	75107	LED/ADAPTOR/PUSHWIRE	Push Wire Adaptor - for Non-Gimbal
	70657	LED/CRT6/RETROFIT/ADAPTOR	Push Wire Adaptor - for Gimbal only
	70663	RT6/RETROFITBAND	Retrofit Bands (6” housing models Progress Lighting P87-AT and Lightolier 1104IC)
	70708	RT6/TRIM/BLK	One Tone: Black Trim & Black Reflector
	70709	RT6/TRIM/ORBZ	One Tone: Bronze Trim & Bronze Reflector
	70710	RT6/TRIM/SN	One Tone: Satin Nickel Trim & Satin Nickel Reflector

T8 Tube

ULTRA LED T8 LAMP KITS

Nominal Wattage	Bulb	Max. Overall Length (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Nominal Input Voltage (V)	Average Rated Life (hr)	CCT (K)	(CRI)	Initial Lumens at 25ºC/77ºF	Notes
11	T8	24	G13	71431	LED11T8L24/F/1X1HO/835/UNV	1-Kit	120-277	60000	3500	85	1070	1,2,5
				71432	LED11T8L24/F/1X1HO/841/UNV	1-Kit	120-277	60000	4100	87	1100	1,2,5
				71433	LED11T8L24/F/1X1HO/850/UNV	1-Kit	120-277	60000	5000	83	1100	1,2,5
				71434	LED11T8L24/F/1X2HO/835/UNV	1-Kit	120-277	60000	3500	85	1070	1,2,5
				71435	LED11T8L24/F/1X2HO/841/UNV	1-Kit	120-277	60000	4100	87	1100	1,2,5
				71436	LED11T8L24/F/1X2HO/850/UNV	1-Kit	120-277	60000	5000	83	1100	1,2,5
22	T8	48	G13	71437	LED22T8L48/F/1X1HO/835/UNV	1-Kit	120-277	60000	3500	85	2130	1,2,5
				71438	LED22T8L48/F/1X1HO/841/UNV	1-Kit	120-277	60000	4100	87	2200	1,2,5
				71439	LED22T8L48/F/1X1HO/850/UNV	1-Kit	120-277	60000	5000	88	2300	1,2,5
				71440	LED22T8L48/F/1X2HO/835/UNV	1-Kit	120-277	60000	3500	85	2130	1,2,5
				71441	LED22T8L48/F/1X2HO/841/UNV	1-Kit	120-277	60000	4100	87	2200	1,2,5
				71442	LED22T8L48/F/1X2HO/850/UNV	1-Kit	120-277	60000	5000	88	2300	1,2,5
22	T8	48	G13	71443	LED22T8L48/F/DIM1X2HO/835/UNV	1-Kit	120-277	60000	3500	85	2130	1,2,5
				71444	LED22T8L48/F/DIM1X2HO/841/UNV	1-Kit	120-277	60000	4100	87	2200	1,2,5
				71445	LED22T8L48/F/DIM1X2HO/850/UNV	1-Kit	120-277	60000	5000	88	2300	1,2,5

NOTES FOR LED LAMPS

Symbol	Description
★	Energy Star qualified lamp.
I/O	Indoor/outdoor damp rated.

Footnote	Description
1	For indoor use only.
2	Operating temperature down to -4°F (-20°C).
3	Operating temperature down to -40°F (-40°C).
4	Suitable for use on compatible dimmers.
5	Not intended for use with emergency light fixtures or exit lights.
6	Use in open fixture.
7	Use in a fixture that supports the added weight of the lamp/bulb.
8	RT6 trims are not compatible with RT6 HO.
9	Stated performance is based on 12VDC input to the MR16 GU5.3 base LED lamp.
10	Not to be used in enclosed insulated ceilings.

For more information about SYLVANIA Energy Star qualified lamps, please visit, www.energystar.gov.

Halogen

Table of Contents

FILAMENTS


CC-8


CC-2V


CC-6


Axial (AX)


Transverse (TR)


C-8 Double End

BASES


CC-8
Miniature Screw


E11 Mini can

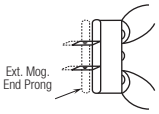

E26 Medium Skt.


E26 Medium


Recessed Single Contact
RSC
R7s

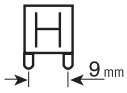

Screw Term.


DC Bayonet
B15d
BA15d

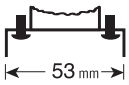


Mogul End Prong

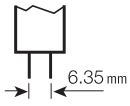
G4



G9



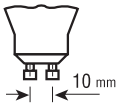
G53



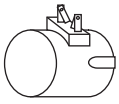
GY 6.35

GU4

GU5.3



GU10


Med Side Pr.

LAMPS


A19


F17


T4 BI-PIN


T4 G9


MR16, MR11


PAR14


PAR16


PAR16 GU10


R20


BR30, BR40


PAR20


PAR30

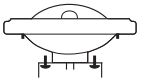

PAR30LN

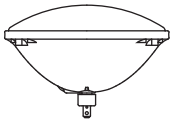

PAR36
Medium Skt.

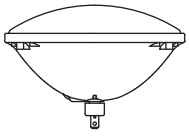

PAR38


PAR38
Medium Side Prong


AR70


AR111


PAR56 Mog End Pr


PAR64 Mog End Pr


T4 DC Bayonet


T3, T4 Mini Can


T3, T4 RSC Double End


B11

HOW TO READ PRODUCT INFORMATION – HALOGEN

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Finish	Pkg Qty	Average Rated Life (hrs)	Initial Lumens	CCT	CRI	Filament	Life (years)	Cost per Year	Notes

Bulb	Describes the shape of the bulb followed by the bulb's major diameter given in eighths of an inch. See page 14: Halogen lamps.
Base	Base Identification. See page 14: Bases.
Symbols & Footnotes	All symbols and footnotes that apply to a specific product will appear in this space. The explanations of the symbols and footnotes are at the end of the halogen section.
Lamp Finish	Applies only to non-reflector type lamps, usually either clear or frosted.
Beam Type	Applies only to reflector type lamps. Describes the beam angle qualitatively as either a spot or a flood, etc.

HOW TO READ ORDERING ABBREVIATIONS

40T4/G9/CL/BL		60PAR38/HAL/IR/NFL25/DL		60PAR30LN/HAL/S/WFL50	
40	Nominal lamp wattage	60	Nominal lamp wattage	60	Nominal lamp wattage
T4/G9	T4 lamp with G9 base	PAR38	Bulb shape PAR38	PAR30LN	Bulb shape PAR30 Long Neck
F, CL	Frosted finish, clear finish	HAL	Halogen lamp	HAL	Halogen lamp
BL	Blister Card Package	IR	Infrared conserving capsule	S	Silver coated reflector
		NFL25	Flood beam 25 degrees	WFL50	Wide Flood beam 50 degrees
		DL, TL	Double Life, Triple Life		

ANSI BEAM ANGLE DESIGNATION

Beam angles for reflector lamps are designated to conform with ANSI C78.379 – Classification of the Beam Patterns of Reflector Lamps. For beam angles less than 13°, beam angles are rounded to the nearest whole number. For beam angles between 13° and 50°, values are rounded to the nearest 5°. For beam angles 50° and greater, the value is rounded to the nearest 10°. As an example, a family of lamps with an average beam angle of 13° is classified as 15°, and a family of lamps with an average beam angle of 54° would be classified as 50°.

LIFE RATING

The average rated life for 130V halogen lamps operated at 120V is conservatively estimated to be approximately 2 times the life when operated at 130V.

ANSI CODE REFERENCE GUIDE

ANSI CODE	ITEM NO.	L.L. ORDERING ABBREVIATION (EXCEPT VOLTS)	VOLTS	ANSI CODE	ITEM NO.	L.L. ORDERING ABBREVIATION (EXCEPT VOLTS)	VOLTS	ANSI CODE	ITEM NO.	L.L. ORDERING ABBREVIATION (EXCEPT VOLTS)	VOLTS
BAB	58301	20MR16/T/FL35/C	12	ETC	58741	150Q/CL/DC	120	FCL	58996	500T3Q/CL	120
EHM	58998	300T3Q/CL	120	ETG	58735	150Q/CL/MC/2	120	FMW	58305	35MR16/T/FL35/C	12
EHT	58762	250Q/CL/MC	120	ETH	58736	150Q/MC	120	FNV	58310	50MR16/T/WFL60/C	12
ESL	58738	150Q/CL/MC	120	EVR	58766	500Q/CL/MC	120	FRB	58303	35MR16/T/SP10/C	12
ESM	58763	250Q/MC	120	EXN	58309	50MR16/T/FL35/C	12	FTB	55133	20MR11/T/SP10/C	12
ESN	58761	100Q/CL/MC	120	EXZ	58308	50MR16/T/NFL25/C	12	FTD	55134	20MR11/T/FL35/C	12
ESR	58755	100Q/CL/DC	120	EYV	58768	500Q/MC	130	FTE	55135	35MR11/T/SP10/C	12
ESS	58720	250Q/CL/DC	120	EYW	58756	500Q/CL/MC	130	FTH	55136	35MR11/T/FL35/C	12
ESX	58300	20MR16/T/SP10/C	12	EYX	58767	500Q/MC	120				

GENERAL PURPOSE HALOGEN LAMPS

Halogen A-line

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Finish	Pkg Qty	Average Rated Life (hrs)	Initial Lumens	CCT	CRI	Filament	Life in Years[1]	Cost per Year[2]	Notes
Halogen A-line Lamps – TRIPLElife™ – 120V															
40	A19	4.38	E26 Medium	52556	40A/HAL/IR/SW/2 120V	Soft White	24	3000	800	2850	100	CC-8	2.7	$4.82	5,6,7
60	A19	4.38	E26 Medium	18999	60A/HAL/F/CLAM 120V	Inside Frost	6	3000	965	2850	100	CC-8	2.7	$7.23	5,6,7
				18960	60A/HAL/F 120V	Inside Frost	12	3000	965	2850	100	CC-8	2.7	$7.23	5,6,7
				18998	60A/HAL/CL/CLAM 120V	Clear	6	3000	965	2850	100	CC-8	2.7	$7.23	5,6,7
70	A19	4.38	E26 Medium	52558	70A/HAL/IR/SW/2 120V	Soft White	24	3000	1600	2850	100	CC-8	2.7	$8.43	5,6,7
Halogen A-line Lamps – DOUBLElife™ – 120V															
28	A19	4.38	E26 Medium	50047	28A19/HAL/DLMS/SW/4 120V	Soft White	48	2000	340	2700	100	CC-8	1.8	$3.37	5,6,7
43	A19	4.38	E26 Medium	50046	43A19/HAL/DLMS/SW/4 120V	Soft White	48	2000	610	2750	100	CC-8	1.8	$5.18	5,6,7
53	A19	4.38	E26 Medium	50045	53A19/HAL/DLMS/SW/4 120V	Soft White	48	2000	800	2775	100	CC-8	1.8	$6.38	5,6,7
72	A19	4.38	E26 Medium	50044	72A19/HAL/DLMS/SW/4 120V	Soft White	48	2000	1150	2800	100	CC-8	1.8	$8.67	5,6,7
Halogen A-line Lamps – Single Life – 120V															
28	A19	4.38	E26 Medium	19008	28A/HAL/SSW/2 120V	Super Soft	24	1000	430	2850	100	CC-8	0.9	$3.37	5,6,7
				52190	28A/HAL/SSW/4 120V	Super Soft	48	1000	430	2850	100	CC-8	0.9	$3.37	5,6,7
				52194	28A/HAL/SW4 120V	Soft White	48	1000	430	2850	100	CC-8	0.9	$3.37	5,6,7
				52549	28A/HAL/CL/2 120V	Clear	24	1000	435	2850	100	CC-8	0.9	$3.37	5,6,7
43	A19	4.38	E26 Medium	19009	43A/HAL/SSW/2 120V	Super Soft	24	1000	750	2900	100	CC-8	0.9	$5.18	5,6,7
				52204	43A/HAL/SW4 120V	Soft White	48	1000	750	2900	100	CC-8	0.9	$5.18	5,6,7
				50005	43A/HAL/SSW/4 120V	Super Soft	48	1000	750	2900	100	CC-8	0.9	$5.18	5,6,7
				52550	43A/HAL/CL/2 120V	Clear	24	1000	765	2900	100	CC-8	0.9	$5.18	5,6,7
53	A19	4.38	E26 Medium	52554	53A/HAL/SSW/2 120V	Super Soft	24	1000	1050	2950	100	CC-8	0.9	$6.38	5,6,7
				50018	53A/HAL/SSW/4 120V	Super Soft	48	1000	1050	2950	100	CC-8	0.9	$6.38	5,6,7
				52213	53A/HAL/SW4 120V	Soft White	48	1000	1050	2950	100	CC-8	0.9	$6.38	5,6,7
				52555	53A/HAL/CL/2 120V	Clear	24	1000	1050	2950	100	CC-8	0.9	$6.38	5,6,7
72	A19	4.38	E26 Medium	19010	72A/HAL/SSW/2 120V	Super Soft	24	1000	1490	3000	100	CC-8	0.9	$8.67	5,6,7
				50006	72A/HAL/SSW/4 120V	Super Soft	48	1000	1490	3000	100	CC-8	0.9	$8.67	5,6,7
				52258	72A/HAL/SW4 120V	Soft White	48	1000	1490	3000	100	CC-8	0.9	$8.67	5,6,7
				52551	72A/HAL/CL/2 120V	Clear	24	1000	1520	3000	100	CC-8	0.9	$8.67	5,6,7

Halogen A-line Lamps – Crystal 120V

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Finish	Pkg Qty	Average Rated Life (hrs)	Initial Lumens	CCT	CRI	Filament	Life in Years[1]	Cost per Year[2]	Notes
50	A19	4.38	E26 Medium	18968	50A/HAL/CRYSTAL 120V	Crystal	12	2500	860	2750	100	CC-8	2.3	$6.02	★,5,6,7
60	A19	4.38	E26 Medium	18942	60A/HAL/CRYSTAL/CLAM 120V	Crystal	6	3000	965	2850	100	CC-8	2.7	$7.23	★,5,6,7

[1] Life in Years based on 3 hours operation per day.
[2] Cost per Year based on 3 hours per day, $0.11 per KWh.


A19


B11


F17


G25

Halogen A-line Lamps – 130V

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Finish	Pkg Qty	Average Rated Life (hrs)	Initial Lumens	CCT	CRI	Filament	Life in Years[1]	Cost per Year[2]	Notes
42	A19	4.38	E26 Medium	18908	42A/HAL/F 130V	Inside Frost	12	3500	580	2750	100	CC-8	3.2	$5.06	★,5,6,7
52	A19	4.38	E26 Medium	18922	52A/HAL/F 130V	Inside Frost	12	3500	770	2775	100	CC-8	3.2	$6.26	★,5,6,7

DECORATIVE HALOGEN LAMPS

Halogen Decor B11 Lamps – 120V

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Finish	Pkg Qty	Average Rated Life (hrs)	Initial Lumens	CCT	CRI	Filament	Life in Years[1]	Cost per Year[2]	Notes
25	B11	4.50	Candelabra	52552	25B11C/HAL/CL 120V	Clear	12	2000	280	2800	100	CC-8	1.8	$3.01	,5,6,7
40	B11	4.50	Candelabra	52553	40B11C/HAL/CL 120V	Clear	12	2000	500	2850	100	CC-8	1.8	$4.82	,5,6,7
40	B11	4.50	E26 Medium	52560	40B11/HAL/CL 120V	Clear	12	2000	500	2850	100	CC-8	1.8	$4.82	,5,6,7

Halogen Decor F17 Lamps – 120V

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Finish	Pkg Qty	Average Rated Life (hrs)	Initial Lumens	CCT	CRI	Filament	Life in Years[1]	Cost per Year[2]	Notes
60	F17	4.50	Medium	13879	60F/HAL/DAY/CLAM 120V	Crystal	6	3000	965	2850	100	CC-8	2.7	$7.23	★,5,6,7

Halogen G25 Lamps – 120V

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Finish	Pkg Qty	Average Rated Life (hrs)	Initial Lumens	CCT	CRI	Filament	Life in Years[1]	Cost per Year[2]	Notes
25	G25	4.44	E26 Medium	52574	25G25/HAL/CL 120V	Clear	6	3000	280	2800	100	CC-8	2.7	$3.01	,5,6,7
40	G25	4.44	E26 Medium	52575	40G25/HAL/CL 120V	Clear	6	3000	500	2800	100	CC-8	2.7	$4.82	,5,6,7

[1] Life in Years based on 3 hours operation per day.
[2] Cost per Year based on 3 hours per day, $0.11 per KWh.


R20


BR30


BR40


PAR14


PAR16


PAR16

DIRECTIONAL HALOGEN REFLECTOR LAMPS

R20, BR30 and BR40 Halogen Reflector Lamps – 120V

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CCT	CRI	Filament	Life in Years[1]	Cost per Year[2]	Notes
35	R20	4.00	E26 Medium	10077	35R20/HAL 120V	6	2500	50	310	2800	100	CC-8	2.3	$4.22	5,6,7
40	R20	4.00	E26 Medium	10215	40R20/HAL/IR 120V	6	3000	50	500	2800	100	CC-8	2.7	$4.82	C,5,6,7
40	BR30	5.50	E26 Medium	10216	40BR30/HAL/IR 120V	6	3000	60	600	2800	100	CC-8	2.7	$4.82	C,5,6,7
50	BR30	5.50	E26 Medium	10078	50BR30/HAL 120V	6	2500	60	585	2800	100	CC-8	2.3	$6.02	5,6,7
40	BR40	6.50	E26 Medium	10217	40BR40/HAL/IR 120V	6	3000	60	630	2800	100	CC-8	2.7	$4.82	C,5,6,7
50	BR40	6.50	E26 Medium	10079	50BR40/HAL 120V	6	2000	60	590	2800	100	CC-8	1.8	$6.02	5,6,7
70	BR40	6.50	E26 Medium	10218	70BR40/HAL/IR 120V	6	3000	60	1330	2850	100	CC-8	2.7	$8.43	C,5,6,7

CAPSYLITE® PAR14 & PAR16 Halogen Reflector Lamps (Exempt from DOE 2009 IRFL Rule Making Efficacy Standards)

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Life in Years[1]	Cost per Year[2]	Notes
CAPSYLITE PAR16 Reflector Lamps – TRIPLElife™, 3000 hour – 120V															
35	PAR16	2.25	GU10	59076	35PAR16/HAL/GU10/FL/BL 120V	6	3000	30	280	500	2750	100	2.7	$4.22	5,6,7
				13256	35PAR16/HAL/GU10/FL/BL3PK 120V	18	3000	30	280	500	2750	100	2.7	$4.22	5,6,7
50	PAR16	2.25	GU10	59075	50PAR16/HAL/GU10/FL/BL 120V	6	3000	30	450	800	2800	100	2.7	$6.02	5,6,7
CAPSYLITE PAR14/PAR16 Reflector Lamps – DOUBLElife™, 2000 hour – 120V															
35	PAR14	2.44	E26 Medium	15364	35PAR14/HAL/FL/RP 120V	6	2000	50	450	200	2775	100	1.8	$4.22	5,6,7
35	PAR16	2.25	GU10	59082	35PAR16/HAL/GU10/FL/BL1 120V	6	2000	40	280	350	2850	100	1.8	$4.22	5,6,7
50	PAR16	2.25	GU10	59067	50PAR16/HAL/GU10/FL/BL3PK	18	2000	40	590	1050	2850	100	1.8	$6.02	5,6,7
60	PAR16	2.88	E26 Medium	59032	60PAR16/HAL/NSP10 120V	15	2000	10	650	5000	2850	100	1.8	$7.23	5,6,7
				59037	60PAR16/HAL/NSP10/RP 120V	6	2000	10	650	5000	2850	100	1.8	$7.23	5,6,7
				59030	60PAR16/HAL/NFL30 120V	15	2000	30	650	1300	2850	100	1.8	$7.23	5,6,7
				59031	60PAR16/HAL/NFL30/RP 120V	6	2000	30	650	1300	2850	100	1.8	$7.23	5,6,7
75	PAR16	2.88	E26 Medium	59036	75PAR16/HAL/NSP10 120V	15	2000	10	900	7500	2900	100	1.8	$9.03	5,6,7
				59033	75PAR16/HAL/NFL30/RP 120V	6	2000	30	900	1900	2900	100	1.8	$9.03	5,6,7
				59034	75PAR16/HAL/NFL30 120V	15	2000	30	900	1900	2900	100	1.8	$9.03	5,6,7
CAPSYLITE PAR16 Reflector Lamps – DOUBLElife™, 2000 hours – 130V															
60	PAR16	2.88	E26 Medium	59040	60PAR16/HAL/NSP10 130V	15	2000	10	650	5000	2850	100	1.8	$7.23	5,6,7
				59038	60PAR16/HAL/NFL30 130V	15	2000	30	650	1300	2850	100	1.8	$7.23	5,6,7
75	PAR16	2.88	E26 Medium	59044	75PAR16/HAL/NSP10 130V	15	2000	10	900	7500	2900	100	1.8	$9.03	5,6,7
				59042	75PAR16/HAL/NFL30 130V	15	2000	30	900	1900	2900	100	1.8	$9.03	5,6,7
CAPSYLITE PAR16 Reflector Lamps – Single Life, 1000 hours – 120V															
50	PAR16	2.25	GU10	59020	50PAR16/HAL/GU10/FL40/CLAM 120V	10	1000	40	400	640	2800	100	0.9	$6.02	5,6,7
				59024	50PAR16/HAL/GU10/FL40 120V	10	1000	40	400	640	2800	100	0.9	$6.02	5,6,7

[1] Life in Years based on 3 hours operation per day.
[2] Cost per Year based on 3 hours per day, $0.11 per KWh.

PAR20

PAR30

CAPSYLITE® PAR20 Halogen Reflector Lamps (Exempt from DOE 2009 IRL Rule Making Efficacy Standards)

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Life in Years[1]	Cost per Year[2]	Notes
CAPSYLITE PAR20 Reflector Lamps – TRIPLElife™, 4500 hours – 120V															
39	PAR20	3.25	E26 Medium	16115	39PAR20/HAL/S/SP10/TL 120V	10	4500	10	475	3800	2750	99	4.1	$4.70	★ 2,5,6
				16116	39PAR20/HAL/S/FL30/TL 120V	10	4500	30	475	1000	2750	99	4.1	$4.70	★ 2,5,6
CAPSYLITE PAR20 Reflector Lamps – DOUBLElife™, 3000 hours – 120V															
39	PAR20	3.25	E26 Medium	16546	39PAR20/HAL/IR/SP10/DL 120V	10	3000	10	510	4000	2800	100	2.7	$4.70	★ 2,5,6
				16114	39PAR20/HAL/IR/FL30/DL 120V	10	3000	30	510	4000	2800	100	2.7	$4.70	★ 2,5,6
				16110	39PAR20/HAL/SP10/DL 120V	10	3000	10	450	3500	2800	100	2.7	$4.70	★ 2,5,6
				16111	39PAR20/HAL/FL30/DL 120V	10	3000	30	450	900	2800	100	2.7	$4.70	★ 2,5,6
CAPSYLITE PAR20 Reflector Lamps – Single Life, 1500 Hours – 120V															
39	PAR20	3.25	E26 Medium	16103	39PAR20/HAL/SP10 120V	10	1500	10	475	3700	2850	100	1.4	$4.70	★ 2,5,6
				16104	39PAR20/HAL/FL30 120V	10	1500	30	475	1000	2850	100	1.4	$4.70	★ 2,5,6
CAPSYLITE PAR20 Reflector Lamps – Single Life, 1500 Hours – 130V															
39	PAR20	3.25	E26 Medium	16108	39PAR20/HAL/SP10 130V	10	1500	10	475	3700	2850	100	1.4	$4.70	★ 2,5,6
				16109	39PAR20/HAL/FL30 130V	10	1500	30	475	1000	2850	100	1.4	$4.70	★ 2,5,6

CAPSYLITE® PAR30 Halogen Reflector Lamps (Meet DOE 2009 IRL Rule Making Efficacy Standards)

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Life in Years[1]	Cost per Year[2]	Notes
CAPSYLITE PAR30 Reflector Lamps – TRIPLElife™, 4500 hours – 120V															
39	PAR30	3.63	E26 Medium	16147	39PAR30/HAL/S/SP10/TL 120V	10	4500	10	530	5900	2750	99	4.1	$4.70	★ 2,5,6
				16148	39PAR30/HAL/S/NFL25/TL 120V	10	4500	25	530	1600	2750	99	4.1	$4.70	★ 2,5,6
42	PAR30	3.63	E26 Medium	16149	42PAR30/HAL/IRS/SP10/TL 120V	10	4500	10	750	8400	2750	99	4.1	$4.70	★ 2,5,6
				16150	42PAR30/HAL/IRS/NFL25/TL 120V	10	4500	25	750	2300	2750	99	4.1	$4.70	★ 2,5,6
50	PAR30	3.63	E26 Medium	16151	50PAR30/HAL/IRS/SP10/TL 120V	10	4500	10	950	10600	2800	99	4.1	$4.70	★ 2,5,6
				16152	50PAR30/HAL/IRS/NFL25/TL 120V	10	4500	25	950	2900	2800	99	4.1	$4.70	★ 2,5,6
CAPSYLITE PAR30 Reflector Lamps – DOUBLElife™, 3000 hours – 120V															
39	PAR30	3.63	E26 Medium	16132	39PAR30/HAL/SP10/DL 120V	10	3000	10	520	5800	2800	100	2.7	$4.70	★ 2,5,6
				16134	39PAR30/HAL/NFL25/DL 120V	10	3000	25	520	1600	2800	100	2.7	$4.70	★ 2,5,6
				16135	39PAR30/HAL/WFL50/DL 120V	10	3000	50	520	600	2800	100	2.7	$4.70	★ 2,5,6
				16136	39PAR30/HAL/IR/WFL50/DL 120V	10	3000	50	610	700	2800	100	2.7	$4.70	★ 2,5,6
50	PAR30	3.63	E26 Medium	16137	50PAR30/HAL/IR/SP10/DL 120V	10	3000	10	850	9500	2825	100	2.7	$6.02	★ 2,5,6
				16138	50PAR30/HAL/IR/NFL25/DL 120V	10	3000	25	850	2600	2825	100	2.7	$6.02	★ 2,5,6
60	PAR30	3.63	E26 Medium	16139	60PAR30/HAL/IR/SP10/DL 120V	10	3000	10	1100	12300	2825	100	2.7	$7.23	★ 2,5,6
				16140	60PAR30/HAL/IR/NFL25/DL 120V	10	3000	25	1100	3400	2825	100	2.7	$7.23	★ 2,5,6

[1] Life in Years based on 3 hours operation per day.
[2] Cost per Year based on 3 hours per day, $0.11 per KWh.

PAR30

PAR30LN

DIRECTIONAL HALOGEN REFLECTOR LAMPS (CONT.)

CAPSYLITE® PAR30 Halogen Reflector Lamps (Meet DOE 2009 IRL Rule Making Efficacy Standards) (Cont.)

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Life in Years[1]	Cost per Year[2]	Notes
CAPSYLITE PAR30 Reflector Lamps – Single Life, 1500 hours – 120V															
39	PAR30	3.63	E26 Medium	16117	39PAR30/HAL/SP10 120V	10	1500	10	550	6100	2850	100	1.4	$7.23	★ 2,5,6
				16118	39PAR30/HAL/NFL25 120V	10	1500	25	550	1700	2850	100	1.4	$7.23	★ 2,5,6
				16119	39PAR30/HAL/WFL50 120V	10	1500	50	550	600	2850	100	1.4	$7.23	★ 2,5,6
50	PAR30	3.63	E26 Medium	16124	50PAR30/HAL/S/SP10 120V	10	1500	10	850	9500	2875	99	1.4	$6.02	★ 2,5,6
				16125	50PAR30/HAL/S/NFL25 120V	10	1500	25	850	2600	2875	99	1.4	$6.02	★ 2,5,6
				16126	50PAR30/HAL/S/WFL50 120V	10	1500	50	850	1000	2875	99	1.4	$6.02	★ 2,5,6
60	PAR30	3.63	E26 Medium	16127	60PAR30/HAL/S/SP10 120V	10	1500	10	1070	12000	2875	99	1.4	$7.23	★ 2,5,6
				16128	60PAR30/HAL/S/NFL25 120V	10	1500	25	1070	3300	2875	99	1.4	$7.23	★ 2,5,6
				16129	60PAR30/HAL/S/WFL50 120V	10	1500	50	1070	1300	2875	99	1.4	$7.23	★ 2,5,6
CAPSYLITE PAR30 Reflector Lamps – Single Life, 1500 hours – 130V															
39	PAR30	3.63	E26 Medium	16121	39PAR30/HAL/SP10 130V	10	1500	10	550	6100	2850	100	1.4	$4.70	★ 2,5,6
				16122	39PAR30/HAL/NFL25 130V	10	1500	25	550	1700	2850	100	1.4	$4.70	★ 2,5,6
				16123	39PAR30/HAL/WFL50 130V	10	1500	50	550	600	2850	100	1.4	$4.70	★ 2,5,6

CAPSYLITE® PAR30 Halogen Reflector Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Life in Years[1]	Cost per Year[2]	Notes
CAPSYLITE PAR30LN Reflector Lamps – TRIPLElife™, 4500 hours – 120V															
39	PAR30LN	4.63	E26 Medium	16562	39PAR30LN/HAL/S/SP10/TL 120V	10	4500	10	530	5900	2750	99	4.1	$4.70	★ 2,5,6
				16563	39PAR30LN/HAL/S/NFL25/TL 120V	10	4500	25	530	1600	2750	99	4.1	$4.70	★ 2,5,6
				16564	39PAR30LN/HAL/S/WFL50/TL 120V	10	4500	50	530	600	2750	99	4.1	$4.70	★ 2,5,6
50	PAR30LN	4.63	E26 Medium	16565	50PAR30LN/HAL/IRS/SP10/TL 120V	10	4500	10	950	10600	2800	99	4.1	$6.02	★ 2,5,6
				16566	50PAR30LN/HAL/IRS/NFL25/TL120V	10	4500	25	950	2900	2800	99	4.1	$6.02	★ 2,5,6
				16567	50PAR30LN/HAL/IRS/WFL50/TL120V	10	4500	50	950	1100	2800	99	4.1	$6.02	★ 2,5,6
CAPSYLITE PAR30LN Reflector Lamps – DOUBLElife™, 3000 hours – 120V															
39	PAR30LN	4.63	E26 Medium	16550	39PAR30LN/HAL/SP10/DL 120V	10	3000	10	520	5800	2800	100	2.7	$4.70	★ 2,5,6
				16551	39PAR30LN/HAL/NFL25/DL 120V	10	3000	25	520	1600	2800	100	2.7	$4.70	★ 2,5,6
				16552	39PAR30LN/HAL/WFL50/DL 120V	10	3000	50	520	600	2800	100	2.7	$4.70	★ 2,5,6
				16553	39PAR30LN/HAL/IR/WFL50/DL 120V	10	3000	50	610	700	2800	100	2.7	$4.70	★ 2,5,6
50	PAR30LN	4.63	E26 Medium	16555	50PAR30LN/HAL/IR/NFL25/DL 120V	10	3000	25	850	2600	2825	100	2.7	$6.02	★ 2,5,6
				16556	50PAR30LN/HAL/IR/WFL50/DL 120V	10	3000	50	850	1000	2825	100	2.7	$6.02	★ 2,5,6
60	PAR30LN	4.63	E26 Medium	16557	60PAR30LN/HAL/IR/SP10/DL 120V	10	3000	10	1100	12300	2850	100	2.7	$7.23	★ 2,5,6
				16558	60PAR30LN/HAL/IR/NFL25/DL 120V	10	3000	25	1100	3400	2850	100	2.7	$7.23	★ 2,5,6
				16559	60PAR30LN/HAL/IR/WFL50/DL 120V	10	3000	50	1100	1300	2850	100	2.7	$7.23	★ 2,5,6

[1] Life in Years based on 3 hours operation per day.
[2] Cost per Year based on 3 hours per day, $0.11 per KWh.

PAR30LN

PAR38

CAPSYLITE® PAR30 Halogen Reflector Lamps (Cont.)

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Life in Years[1]	Cost per Year[2]	Notes
CAPSYLITE PAR30LN Reflector Lamps – Single Life, 1500 hours – 120V															
39	PAR30LN	4.63	E26 Medium	16153	39PAR30LN/HAL/SP10 120V	10	1500	10	550	6100	2850	100	1.4	$4.70	★ 2,5,6
				16154	39PAR30LN/HAL/NFL25 120V	10	1500	25	550	1700	2850	100	1.4	$4.70	★ 2,5,6
				16156	39PAR30LN/HAL/WFL50 120V	10	1500	50	550	600	2850	100	1.4	$4.70	★ 2,5,6
60	PAR30LN	4.63	E26 Medium	16166	60PAR30LN/HAL/S/SP10 120V	10	1500	10	1070	12000	2900	99	1.4	$7.23	★ 2,5,6
				16167	60PAR30LN/HAL/S/NFL25 120V	10	1500	25	1070	3300	2900	99	1.4	$7.23	★ 2,5,6
				16168	60PAR30LN/HAL/S/WFL50 120V	10	1500	50	1070	1300	2900	99	1.4	$7.23	★ 2,5,6
				16173	60PAR30LN/HAL/S/WFL50/CVP 120V	6	1500	50	1070	1300	2900	99	1.4	$7.23	★ 2,5,6
CAPSYLITE PAR30LN Reflector Lamps – Single Life, 1500 hours – 130V															
39	PAR30LN	4.63	E26 Medium	16159	39PAR30LN/HAL/SP10 130V 10/CS	10	1500	10	550	6100	2850	100	1.4	$4.70	★ 2,5,6
				16160	39PAR30LN/HAL/NFL25 130V	10	1500	25	550	1700	2850	100	1.4	$4.70	★ 2,5,6
				16161	39PAR30LN/HAL/WFL50 130V	10	1500	50	550	600	2850	100	1.4	$4.70	★ 2,5,6

CAPSYLITE® PAR38 Halogen Reflector Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Life in Years[1]	Cost per Year[2]	Notes
CAPSYLITE PAR38 Reflector Lamps – TRIPLElife™, 4500 hours – 120V															
39	PAR38	5.31	E26 Medium Skirted	16596	39PAR38/HAL/S/SP10/TL 120V	10	4500	10	530	7400	2750	99	4.1	$4.70	★ 2,5,6
				16597	39PAR38/HAL/S/NFL25/TL 120V	10	4500	25	530	2100	2750	99	4.1	$4.70	★ 2,5,6
42	PAR38	5.31	E26 Medium Skirted	16598	42PAR38/HAL/IRS/SP10/TL 120V	10	4500	10	750	10500	2750	99	4.1	$5.06	★ 2,5,6
				16600	42PAR38/HAL/IRS/NFL25/TL 120V	10	4500	25	750	2900	2750	99	4.1	$5.06	★ 2,5,6
50	PAR38	5.31	E26 Medium Skirted	16601	50PAR38/HAL/IRS/SP10/TL 120V	10	4500	10	950	13300	2800	99	4.1	$6.02	★ 2,5,6
				16602	50PAR38/HAL/IRS/NFL25/TL 120V	10	4500	25	950	3700	2800	99	4.1	$6.02	★ 2,5,6
60	PAR38	5.31	E26 Medium Skirted	16603	60PAR38/HAL/IRS/SP10/TL 120V	10	4500	10	1200	16800	2825	99	4.1	$7.23	★ 2,5,6
				16604	60PAR38/HAL/IRS/NFL25/TL 120V	10	4500	25	1200	4600	2850	99	4.1	$7.23	★ 2,5,6
CAPSYLITE PAR38 Reflector Lamps – DOUBLElife™, 3000 hours – 120V															
39	PAR38	5.31	E26 Medium Skirted	16579	39PAR38/HAL/S10/DL 120V	10	3000	10	520	7300	2800	100	2.7	$4.70	★ 2,5,6
				16580	39PAR38/HAL/NFL25/DL 120V	10	3000	25	520	2000	2800	100	2.7	$4.70	★ 2,5,6
50	PAR38	5.31	E26 Medium Skirted	16582	50PAR38/HAL/IR/SP10/DL 120V	10	3000	10	850	11900	2825	100	2.7	$6.02	★ 2,5,6
				16583	50PAR38/HAL/IR/NFL25/DL 120V	10	3000	25	850	3300	2825	100	2.7	$6.02	★ 2,5,6
60	PAR38	5.31	E26 Medium Skirted	16584	60PAR38/HAL/IR/SP10/DL 120V	10	3000	10	1100	15400	2850	100	2.7	$7.23	★ 2,5,6
				16585	60PAR38/HAL/IR/NFL25/DL 120V	10	3000	25	1100	4300	2850	100	2.7	$7.23	★ 2,5,6
				16588	60PAR38/HAL/IRS/NFL25/DL 120V	10	3000	25	1260	4800	2850	99	2.7	$7.23	★ 2,5,6
70	PAR38	5.31	E26 Medium Skirted	16590	70PAR38/HAL/IR/SP10/DL 120V	10	3000	10	1305	18000	2875	100	2.7	$8.43	★ 2,5,6
				16591	70PAR38/HAL/IR/NFL25/DL 120V	10	3000	25	1305	5100	2875	100	2.7	$8.43	★ 2,5,6
				16592	70PAR38/HAL/IR/WFL50/DL 120V	10	3000	50	1305	1900	2875	100	2.7	$8.43	★ 2,5,6

[1] Life in Years based on 3 hours operation per day.

[2] Cost per Year based on 3 hours per day, $0.11 per KWh.


PAR38


PAR38

DIRECTIONAL HALOGEN REFLECTOR LAMPS (CONT.)

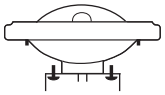
CAPSYLITE® PAR38 Halogen Reflector Lamps (Cont.)

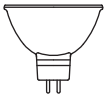
Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Life in Years[1]	Cost per Year[2]	Notes
CAPSYLITE PAR38 Reflector Lamps – DOUBLElife™, 3000 hours – 120V (cont.)															
80	PAR38	5.31	E26 Medium Skirted	16593	80PAR38/HAL/IR/SP10/DL 120V	10	3000	10	1305	21600	2900	100	2.7	$9.64	★ 2,5,6
				16594	80PAR38/HAL/IR/NFL25/DL 120V	10	3000	25	1305	6000	2900	100	2.7	$9.64	★ 2,5,6
				16595	80PAR38/HAL/IR/WFL50/DL 120V	10	3000	50	1305	2300	2900	100	2.7	$9.64	★ 2,5,6
CAPSYLITE PAR38 Reflector Lamps – Single Life, 1500 hours – 120V															
39	PAR38	5.31	E26 Medium Skirted	16728	39PAR38/HAL/SP10 120V	10	1500	10	550	7700	2850	100	1.4	$4.70	★ 2,5,6
				16729	39PAR38/HAL/NFL25 120V	10	1500	25	550	2100	2850	100	1.4	$4.70	★ 2,5,6
50	PAR38	5.31	E26 Medium Skirted	16734	50PAR38/HAL/S/SP10 120V	10	1500	10	850	11900	2875	99	1.4	$6.02	★ 2,5,6
				16735	50PAR38/HAL/S/NFL25 120V	10	1500	25	850	3300	2875	99	1.4	$6.02	★ 2,5,6
60	PAR38	5.31	E26 Medium Skirted	16737	60PAR38/HAL/S/SP10 120V	10	1500	10	1070	14900	2900	99	1.4	$7.23	★ 2,5,6
				16738	60PAR38/HAL/S/NFL25 120V	10	1500	25	1070	4100	2900	99	1.4	$7.23	★ 2,5,6
				16740	60PAR38/HAL/S/NFL25/CVP/6 120V	6	1500	25	1070	4100	2900	99	1.4	$7.23	★ 2,5,6
70	PAR38	5.31	E26 Medium Skirted	16742	70PAR38/HAL/S/SP10 120V	10	1500	10	1305	18200	2925	99	1.4	$8.43	★ 2,5,6
				16743	70PAR38/HAL/S/NFL25 120V	10	1500	25	1305	5100	2925	99	1.4	$8.43	★ 2,5,6
				16745	70PAR38/HAL/S/NFL25/RP 120V	6	1500	25	1305	5100	2925	99	1.4	$8.43	★ 2,5,6
				16746	70PAR38/HAL/S/WFL50 120V	10	1500	50	1305	1900	2925	99	1.4	$8.43	★ 2,5,6
80	PAR38	5.31	E26 Medium Skirted	16747	80PAR38/HAL/S/SP10 120V	10	1500	10	1545	21600	2950	99	1.4	$9.64	★ 2,5,6
				16748	80PAR38/HAL/S/NFL25 120V	10	1500	25	1545	6000	2950	99	1.4	$9.64	★ 2,5,6
				16751	80PAR38/HAL/S/WFL50 120V	10	1500	50	1545	2300	2950	99	1.4	$9.64	★ 2,5,6
CAPSYLITE PAR38 Reflector Lamps – Single Life, 1500 hours – 130V															
39	PAR38	5.31	E26 Medium Skirted	16732	39PAR38/HAL/SP10 130V	10	1500	10	50	700	2850	100	1.4	$4.70	★ 2,5,6
				16733	39PAR38/HAL/NFL25 130V	10	1500	25	550	2100	2850	100	1.4	$4.70	★ 2,5,6
CAPSYLITE PAR38 Reflector Lamps – Medium Side Prong – 120V															
75	PAR38	5.31	Med Side Prong	13850	75PAR38/3FL 120V	12	2000	30	1040	1800	2850	100	1.8	$9.03	★ 2,5,6
90	PAR38	5.31	Med Side Prong	14630	90PAR38/HAL/3WSP12 120V	15	2500	12	1310	14300	2925	100	2.3	$10.84	★ 2,5,6
				14632	90PAR38/HAL/3FL30 120V	15	2500	30	1310	500	2925	100	2.3	$10.84	★ 2,5,6
CAPSYLITE PAR38 Reflector Lamps – 250W Lamps – 120V															
250	PAR38	5.31	E26 Medium Skirted	15526	250PAR38/HAL/SP10 120V	6	4500	10	3600	46500	3025	100	4.1	$30.11	★ 2,5,6
				15558	250PAR38/HAL/FL30 120V	6	4500	30	3600	9000	3025	100	4.1	$30.11	★ 2,5,6
CAPSYLITE PAR38 Reflector Lamps – Colored Lamps – 120V															
100	PAR38	5.31	E26 Medium Skirted	13932	100PAR38/FL/Y/RP 120V	6	2000	30	Yellow	–	–	–	–	–	★ 2,5,6
				13933	100PAR38/FL/R/RP 120V	6	2000	30	Red	–	–	–	–	–	★ 2,5,6
				13934	100PAR38/FL/A/RP 120V	6	2000	30	Amber	–	–	–	–	–	★ 2,5,6
				13948	100PAR38/FL/B/RP 120V	6	2000	30	Blue	–	–	–	–	–	★ 2,5,6
				13949	100PAR38/FL/G/RP 120V	6	2000	30	Green	–	–	–	–	–	★ 2,5,6

[1] Life in Years based on 3 hours operation per day.
[2] Cost per Year based on 3 hours per day, $0.11 per KWh.


PAR36


AR70


AR111


MR11

CAPSYLITE® PAR36 Halogen Reflector Lamps, 12V

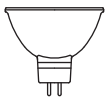
Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Filament	Notes
36	PAR36	2.75	Screw Terminal	55057	36PAR36/HAL/WFL32/SCR 12V	12	4000	32	7	1000	3000	100	C-8	★,VO,2,5,6
				55090	36PAR36/HAL/NSP13 12V	12	4000	13	500	3500	3000	100	C-8	★,VO,2,5,6
				55091	36PAR36/HAL/WFL30 12V	12	4000	30	500	1000	3000	100	C-8	★,VO,2,5,6
				55100	36PAR36/HAL/VNSP5 12V	12	4000	5	500	17000	3000	100	C-8	★,VO,2,5,6
50	PAR36	2.75	Screw Terminal	55118	50PAR36/HAL/NSP6 12V	12	4000	6	700	25000	3000	100	C-8	★,VO,2,5,6
				55017	50PAR36/HAL/WFL30 12V	12	4000	30	700	1400	3000	100	C-8	★,VO,2,5,6

AR70 & AR111 Halogen Aluminum Reflector Lamps, 12V

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Filament	Notes
AR70 Aluminum Reflector Lamps – UV Filter capsule with axial filament, engineered for precise aiming – 12V														
20	AR70	1.97	BA15d Double Contact Bayonet	59013	20AR70/SP8 12V	10	3000	8	150	7700	3000	100	C-8	,6,7
				59012	20AR70/FL25 12V	10	3000	25	150	900	3000	100	C-8	,6,7
50	AR70	1.97	BA15d Double Contact Bayonet	59017	50AR70/SP8 12V	10	3000	8	400	12500	3000	100	C-8	,6,7
				59016	50AR70/FL25 12V	10	3000	25	400	2600	3000	100	C-8	,6,7
AR111 Aluminum Reflector Lamps – UV Filter capsule with axial filament, engineered for precise aiming – 12V														
35	AR111	2.64	Push Screw Terminal	55102	35AR111/SSP4 12V	6	3000	4	350	35000	3000	100	C-8	,6,7
				55110	35AR111/SP8 12V	6	3000	8	350	14000	3000	100	C-8	,6,7
				55114	35AR111/FL25 12V	6	3000	25	350	2500	3000	100	C-8	,6,7
50	AR111	2.64	Push Screw Terminal	55105	50AR111/SSP4 12V	6	3000	4	570	40000	3000	100	C-8	,6,7
				55104	50AR111/SP8 12V	6	3000	8	570	20000	3000	100	C-8	,6,7
				55103	50AR111/FL25 12V	6	3000	25	570	4000	3000	100	C-8	,6,7
75	AR111	2.64	Push Screw Terminal	55125	75AR111/SP8 12V	6	3000	8	880	30000	3000	100	C-8	,6,7
				55123	75AR111/FL25 12V	6	3000	25	880	5300	3000	100	C-8	,6,7
100	AR111	2.64	Push Screw Terminal	55129	100AR111/SP8 12V	6	3000	8	1200	48000	3000	100	C-8	,6,7
				55127	100AR111/FL25 12V	6	3000	25	1200	8500	3000	100	C-8	,6,7

TRU-AIM® MR11/MR16 Halogen Lamps, 12V

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Filament	Notes
TRU-AIM® MR11 Lamps – UV Filter capsule with axial filament in covered, dichroic reflector, 12V														
20	MR11	1.63	GU4 Bipin	55133	20MR11/T/SP10/C(FTB) 12V	10	4000	10	270	4000	3000	100	Axial	,5,6,7
				55134	20MR11/T/FL35/C(FTD) 12V	10	4000	35	270	700	3000	100	Axial	,5,6,7
35	MR11	1.63	GU4 Bipin	55135	35MR11/T/SP10/C(FTE) 12V	10	4000	10	580	6200	3000	100	Axial	,5,6,7
				55136	35MR11/T/FL35/C(FTH) 12V	10	4000	35	580	1350	3000	100	Axial	,5,6,7

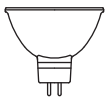


MR16

DIRECTIONAL HALOGEN REFLECTOR LAMPS (CONT.)

TRU-AIM® MR11/MR16 Halogen Lamps, 12V (Cont.)

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Filament	Notes
TRU-AIM® MR16 Lamps – UV Filter capsule with axial filament in covered, dichroic reflector, 12V														
20	MR16	1.75	GU5.3 Bipin	54305	20MR16/SP10/C(ESX) 12V	20	2000	10	250	3000	3000	100	Axial	5,6,7
				54306	20MR16/FL35/C(BAB) 12V	20	2000	35	250	510	3000	100	Axial	5,6,7
				58514	20MR16/FL/C/BAB/CLAM 12V	6	2000	35	200	780	3000	100	Axial	5,6,7
35	MR16	1.75	GU5.3 Bipin	58324	35MR16/FL35/C(FMW)12V	20	2000	35	500	1000	3000	100	Axial	5,6,7
				54307	35MR16/SP10/C(FRB)12V	20	2000	10	500	6200	3000	100	Axial	5,6,7
				58322	35MR16/NFL25/C 12V	20	2000	25	500	2000	3000	100	Axial	5,6,7
50	MR16	1.75	GU5.3 Bipin	58325	50MR16/SP10/C(EXT) 12V	20	2000	10	700	7800	3000	100	Axial	5,6,7
				58326	50MR16/NFL25/C(EXZ) 12V	20	2000	25	700	2800	3000	100	Axial	5,6,7
				58327	50MR16/FL35/C(EXN) 12V	20	2000	35	700	1450	3000	100	Axial	5,6,7
				58328	50MR16/WFL60/C(FNV) 12V	20	2000	60	700	690	3000	100	Axial	5,6,7
				58516	50MR16/FL/C/EXN/CLAM 12V	6	2000	35	600	2200	3000	100		5,6,7
TRU-AIM BRILLIANT MR16 Lamps – UV Filter capsule with axial filament, constant color aluminum reflector														
20	MR16	1.75	GU5.3 Bipin	58314	20MR16/B/SP10 12V	20	4000	10	250	5000	3000	100	Axial	5,6,7,11
				58315	20MR16/B/FL35 12V	20	4000	35	250	780	3000	100	Axial	5,6,7,11
35	MR16	1.75	GU5.3 Bipin	58317	35MR16/B/FL35 12V	20	4000	35	500	1500	3000	100	Axial	5,6,7,11
50	MR16	1.75	GU5.3 Bipin	58319	50MR16/B/SP10 12V	20	4000	10	700	11500	3000	100	Axial	5,6,7,11
				58320	50MR16/B/NFL25 12V	20	4000	25	700	4400	3000	100	Axial	5,6,7,11
				58321	50MR16/B/FL35 12V	20	4000	35	700	2200	3000	100	Axial	5,6,7,11
				58511	50MR16/B/FL35/C 12V	20	4000	35	700	2200	3000	100	Axial	5,6,7,11
TRU-AIM TITAN MR16 Lamps – UV Filter capsule with axial filament in covered, constant color hard dichroic reflector														
20	MR16	1.75	GU5.3 Bipin	58300	20MR16/T/SP10/C(ESX) 12V	20	4000	10	300	5000	3000	100	Axial	5,6,7
				58301	20MR16/T/FL35/C(BAB) 12V	20	4000	35	300	780	3000	100	Axial	5,6,7
				58302	20MR16/T/WFL60/C 12V	20	4000	60	300	350	3000	100	Axial	5,6,7
35	MR16	1.75	GU5.3 Bipin	58303	35MR16/T/SP10/C(FRB) 12V	20	4000	10	700	9100	3000	100	Axial	5,6,7
				58304	35MR16/T/NFL25/C 12V	20	4000	25	700	3100	3000	100	Axial	5,6,7
				58305	35MR16/T/FL35/C(FMW) 12V	20	4000	35	700	1500	3000	100	Axial	5,6,7
				58306	35MR16/T/WFL60/C 12V	20	4000	60	700	700	3000	100	Axial	5,6,7
50	MR16	1.75	GU5.3 Bipin	58307	50MR16/T/SP10/C(EXT) 12V	20	4000	10	900	11500	3000	100	Axial	5,6,7
				58308	50MR16/T/NFL25/C(EXZ) 12V	20	4000	25	900	4400	3000	100	Axial	5,6,7
				58309	50MR16/T/FL35/C(EXN) 12V	20	4000	35	900	2200	3000	100	Axial	5,6,7
				58310	50MR16/T/WFL60/C(FNV) 12V	20	4000	60	900	1100	3000	100	Axial	5,6,7
TRU-AIM IR Infrared MR 16 Lamps – UV Filter capsule with axial filament in covered, constant color hard dichroic reflector														
20	MR16	1.75	GU5.3 Bipin	58531	20MR16/IR/SP10/C 12V	20	5000	10	380	6000	3000	100	Axial	5,6,7
				58532	20MR16/IR/NFL25/C 12V	20	5000	25	380	2300	3000	100	Axial	5,6,7
				58533	20MR16/IR/FL35/C 12V	20	5000	35	380	1000	3000	100	Axial	5,6,7
				58838	20MR16/IR/WFL60/C 12V	20	5000	60	380	450	3000	100	Axial	5,6,7


MR16


T4 G9


T3, T4 Mini Can


T3 DC Bayonet

TRU-AIM® MR11/MR16 Halogen Lamps, 12V (Cont.)

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	Beam Angle	Initial Lumens	CBCP	CCT	CRI	Filament	Notes
TRU-AIM IR Infrared MR 16 Lamps – UV Filter capsule with axial filament in covered, constant color hard dichroic reflector (cont.)														
37	MR16	1.75	GU5.3 Bipin	58641	37MR16/IR/SP10/C 12V	20	5000	10	800	12500	3000	100	Axial	5,6,7
				58634	37MR16/IR/NFL25/C 12V	20	5000	25	800	4400	3000	100	Axial	5,6,7
				58633	37MR16/IR/FL35/C 12V	20	5000	35	800	2200	3000	100	Axial	5,6,7
				58837	37MR16/IR/WFL60/C 12V	20	5000	60	800	1100	3000	100	Axial	5,6,7
50	MR16	1.75	GU5.3 Bipin	54175	50MR16/IR/SP10/C 12V	20	5000	10	1100	15000	3000	100	Axial	5,6,7
				54174	50MR16/IR/NFL25/C 12V	20	5000	25	1100	5700	3000	100	Axial	5,6,7
				54173	50MR16/IR/FL35/C 12V	20	5000	35	1100	2850	3000	100	Axial	5,6,7
				54237	50MR16/IR/WFL60/C 12V	20	5000	60	1100	1430	3000	100	Axial	5,6,7

SPECIALTY HALOGEN LAMPS

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Finish	Pkg Qty	Average Rated Life (hrs)	Initial Lumens	CCT	CRI	Filament	Notes
CAPSYLITE® G9 Halogen Lamps													
25	G9	1.69	G9 Bipin	57020	25T4/G9/CL 120V	Clear	20	2000	255	2900	100	CC-2V	5,6,7
40	G9	1.69	G9 Bipin	57022	40T4/G9/CL 120V	Clear	20	2000	510	2900	100	CC-2V	5,6,7
				57025	40T4/G9/F 120V	Frosted	20	2000	480	2900	100	CC-2V	5,6,7
				57033	40T4G9/CL/BL 120V	Clear	10	2000	510	2900	100	CC-2V	5,6,7
Single End 120V Halogen Lamps													
75	T3	2.56	E11 Mini Can	58884	75Q/CL/MC/RP 120V	Clear	6	2000	1400	2950	100	CC-8	6,7,12
100	T3	2.75	E11 Mini Can	58761	100Q/CL/MC(ESN) 120V	Clear	12	1000	1800	2950	100	CC-8	6,7,12
150	T3	3.00	E11 Mini Can	58735	150Q/CL/MC/2(ETG) 120V	Clear	12	2000	2800	2950	100	CC-8	6,7,12
				58736	150Q/MC(ETH) 120V	Frosted	12	2000	2700	2950	100	CC-8	6,7,12
150	T3	2.75	E11 Mini Can	58738	150Q/CL/MC(ESL) 120V	Clear	12	1000	2800	2950	100	CC-8	6,7,12
250	T3	3.13	BA15d DC Bayonet	58720	250Q/CL/DC(ESS) 120V	Clear	12	2000	5000	2950	100	CC-8	6,7,12
250	T3	3.13	E11 Mini Can	58762	250Q/CL/MC(EHT) 120V	Clear	12	2000	5000	2950	100	CC-8	6,7,12
				58763	250Q/MC(ESM) 120V	Frosted	12	2000	4850	2950	100	CC-8	6,7,12
500	T3	3.75	E11 Mini Can	58766	500Q/CL/MC(EVR) 120V	Clear	12	2000	10450	2950	100	CC-8	6,7,12
				58767	500Q/MC(EYX) 120V	Frosted	12	2000	10100	2950	100	CC-8	6,7,12
Single End 130V Halogen Lamps													
100	T3	2.44	BA15d DC Bayonet	58732	100Q/CL/DC 130V	Clear	12	1000	1900	2950	100	CC-8	6,7,12
100	T3	2.75	E11 Mini Can	58760	100Q/CL/MC 130V	Clear	12	1000	1800	2950	100	CC-8	6,7,12
150	T3	2.75	E11 Mini Can	58733	150Q/CL/MC 130V	Clear	12	1000	2800	2950	100	CC-8	6,7,12
150	T3	2.75	BA15d DC Bayonet	58741	150Q/CL/DC(ETC) 120V	Clear	12	2000	2800	2950	100	CC-8	6,7,12

Specifications subject to change without notice.

Notes on page 27

25

T3, T4 RSC Double

T4 Bi-Pin

DIRECTIONAL HALOGEN REFLECTOR LAMPS (CONT.)

SPECIALTY HALOGEN LAMPS (Cont.)

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Finish	Pkg Qty	Average Rated Life (hrs)	Initial Lumens	CCT	CRI	Filament	Notes
Single End 130V Halogen Lamps													
250	T3	3.13	E11 Mini Can	58764	250Q/CL/MC 130V	Clear	12	2000	5000	2950	100	CC-8	6,7,12
500	T3	3.75	E11 Mini Can	58756	500Q/CL/MC(EYW) 130V	Clear	12	2000	10000	2950	100	CC-8	6,7,12
				58768	500Q/MC(EYV) 130V	Frosted	12	2000	10000	2950	100	CC-8	6,7,12
Double-end Quartz 120V Halogen Lamps													
100	T3	3.13	R7s RSC	58999	100T3Q/S/CL 120V	Clear	20	2000	1600	2950	100	CC-8	6,7,12
				58887	100T3Q/S/CL/RP 120V	Clear	6	2000	1600	2950	100	CC-8	6,7,12
150	T3	3.13	R7s RSC	58885	150T3Q/CL/RP 120V	Clear	6	2000	2250	2950	100	CC-8	6,7,12
				58886	150T3Q/S/CL/RP 120V	Clear	6	2000	2400	2950	100	CC-8	6,7,12
				59001	150T3Q/S/CL 120V	Clear	20	2000	2400	2950	100	CC-8	6,7,12
200	T3	4.69	R7s RSC	59003	200T3Q/CL 120V	Clear	20	2000	3350	2950	100	CC-8	6,7,12
250	T3	4.69	R7s RSC	58527	250T3Q/CL/RP 120V	Clear	12	2000	4000	2950	100	CC-8	6,7,12
300	T3	4.69	R7s RSC	58920	300T3Q/CL/RP(EHM) 120V	Clear	6	2000	6000	2950	100	CC-8	6,7,12
				58998	300T3Q/CL(EHM) 120V	Clear	20	2000	6000	2950	100	CC-8	6,7,12
500	T3	4.69	R7s RSC	58865	500T3Q/CL/RP(FCL) 120V	Clear	6	2000	8750	2950	100	CC-8	6,7,12
				58996	500T3Q/CL(FCL) 120V	Clear	20	2000	8750	2950	100	CC-8	6,7,12
Double-ended Quartz 130V Halogen Lamps													
300	T3	4.69	R7s RSC	59000	300T3Q/CL 130V	Clear	20	2000	6000	2950	100	CC-8	6,7,12
500	T3	4.69	R7s RSC	58997	500T3Q/CL 130V	Clear	20	2000	8750	2950	100	CC-8	6,7,12
Single Ended BiPin Halogen Lamps with Axial Filament, 12V													
10	T3	1.25	G4 Bipin	58691	10T3Q/CL/AX 12V	Clear	40	4000	130	3000	100	Axial	6,7,12
20	T3	1.25	G4 Bipin	58694	20T3Q/CL/AX 12V	Clear	40	2000	320	3000	100	Axial	6,7,12
20	T4	1.75	GY6.35 Bipin	58663	20T4Q/CL/AX 12V	Clear	40	4000	290	3000	100	Axial	6,7,12
35	T4	1.75	GY6.35 Bipin	58672	35T4Q/CL/AX 12V	Clear	40	4000	580	3000	100	Axial	6,7,12
50	T4	1.75	GY6.35 Bipin	58676	50T4Q/CL/AX 12V	Clear	40	4000	900	3000	100	Axial	6,7,12
75	T4	1.75	GY6.35 Bipin	58680	75T4Q/CL/AX 12V	Clear	40	4000	1450	3000	100	Axial	6,7,12
Single Ended BiPin Halogen Lamps with Transverse Filament, 12V													
5	T3	1.25	G4 Bipin	58652	5T3Q/CL 12V	Clear	40	4000	60	3000	100	Transverse	6,7,12
10	T3	1.25	G4 Bipin	58650	10T3Q/CL/RP 12V	Clear	6	2000	140	3000	100	Transverse	6,7,12
				58658	10T3Q/CL 12V	Clear	40	2000	140	3000	100	Transverse	6,7,12
20	T3	1.25	G4 Bipin	58655	20T3Q/CL/RP 12V	Clear	6	2000	320	3000	100	Transverse	6,7,12
				58661	20T3Q/CL 12V	Clear	40	2000	320	3000	100	Transverse	6,7,12
50	T4	1.75	GY6.35 Bipin	58660	50T4Q/CL/RP 12V	Clear	6	2000	910	3000	100	Transverse	6,7,12
				58675	50T4Q/CL 12V	Clear	40	2000	910	3000	100	Transverse	6,7,12
Single Ended BiPin Lamps with Axial Filament, 24V													
20	T3	1.25	G4 Bipin	58662	20T3Q/CL/24V	Clear	40	1000	320	3000	100	Axial	6,7,12
50	T4	1.75	GY6.35 Bipin	58678	50T4Q/CL/AX/24V	Clear	40	2000	900	3000	100	Axial	6,7,12

NOTES FOR HALOGEN LAMPS

Symbol	Description
●	Indicates aluminum base.
▼	Operate base down to horizontal.
★	Heat resistant, hard glass.
I/O	PAR lamps are suitable for indoor and outdoor use.
Ⓔ	This lamp or ballast meets minimum Federal efficiency standards.
	This ECOLOGIC® lamp was designed to pass the Federal TCLP criteria for classification as non-hazardous waste in most states. Disposal regulations may vary; check local and state regulations.

Footnote	Description
1	Designed for service other than illumination.
2	Suitable for indoor and outdoor use.
3	For indoor use only.
4	Because this bulb radiates considerable heat, do not use in enclosed, close fitting fixtures, or in close proximity to people, combustible materials or substances adversely affected by heat or drying.
5	Even though this bulb may continue to light after the outer bulb, lens or reflector is cracked or broken, it should be replaced as soon as possible since the pressure filled inner capsule could unexpectedly shatter, creating a risk of personal injury or property damage. In addition, the inner capsule produces ultraviolet radiation that can cause injury to the eyes and skin with prolonged exposure without the blocking effect of the outer glass bulb.
6	To avoid electric shock and/or skin burns, turn off power and allow bulb to cool before handling or attempting replacement.
7	For indoor or outdoor use where not directly exposed to weather. Exposure to weather may damage the bulb.
8	Lamp may not be operated on a dimmer or DC current.
9	Complies with part 15 of FCC rules.
10	Use only in fixtures designed to adequately dissipate heat from lamp.
11	A protective shield must be used external to the lamp.
12	A suitable protective shield, screening technique or both must be used to protect people and surroundings from the possibility of a lamp shattering and from possible ultraviolet radiation.

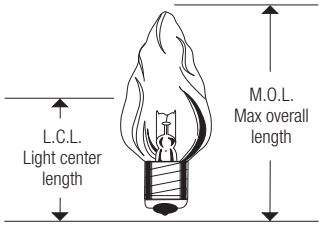
NOTES:

Incandescent

Table of Contents

BULB IDENTIFICATION

Light Center Length (L.C.L.) is the distance from the center of the light source to the following point for the base used: Screw bases…bottom base contact; Bayonet candelabra and medium bayonet...top of base pins.



Bulb size – Max. Diameter (Divide by 8)

A-21 – 21⁄8 = 2 5⁄8" Dia.

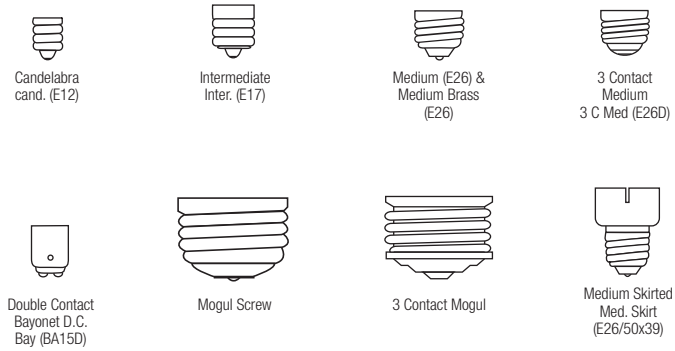
G-40 – 40⁄8 = 5" Dia.

T-12 – 12⁄8 = 1 1⁄2" Dia.

PS-30 – 30⁄8 = 3 3⁄4" Dia.

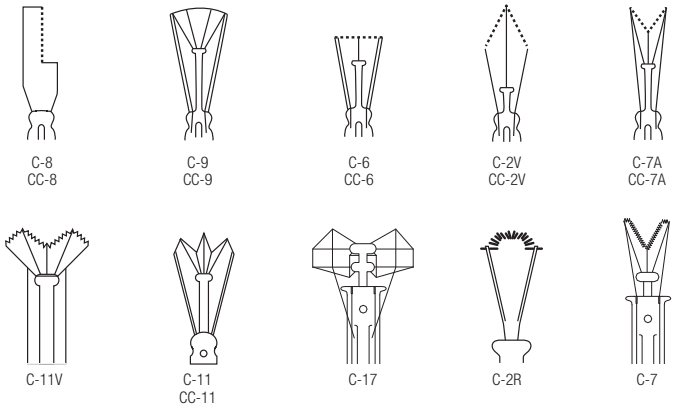
BASE IDENTIFICATION

Typical bases are shown. One lead-in wire is soldered to the center contact and the other soldered or welded to the upper rim of the base shell. Base shells are typically made of brass or aluminum. ANSI designations are in parentheses.



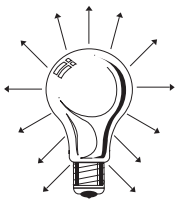
FILAMENT IDENTIFICATION

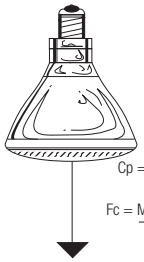
A FILAMENT designation consists of a prefix letter to indicate whether the wire is straight or coiled, and a number to indicate the arrangement of the filament on the supports. Prefix letters include: C (coiled) – wire is wound into a helical coil or it may be deeply fluted; CC (coiled coil) – wire is wound into a helical coil and this coiled wire again wound into a helical coil.



ADDITIONAL INFORMATION

Lamps listed 115-125 volts (design voltage 120), 120-130 volts (design voltage 125), 125-130 volts (design voltage 130) and 230-250 volts (design voltage 240) are intended for use on circuits normally varying within these voltage limits.



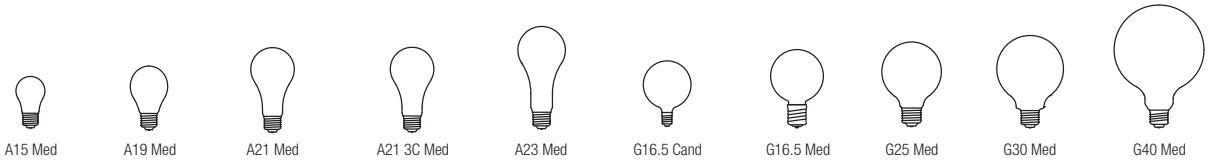


Finishes

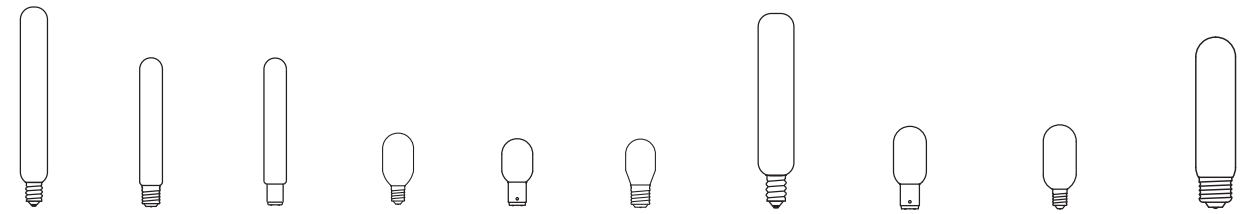
W or SW - Soft White
DAY - Daylight®
Y - Yellow
B - Blue
R - Red
G - Green
A - Amber
IC - Iridescent clear
FL - Flood
SP - Spot
IF - Inside frost
AIC - Amber iridescent clear

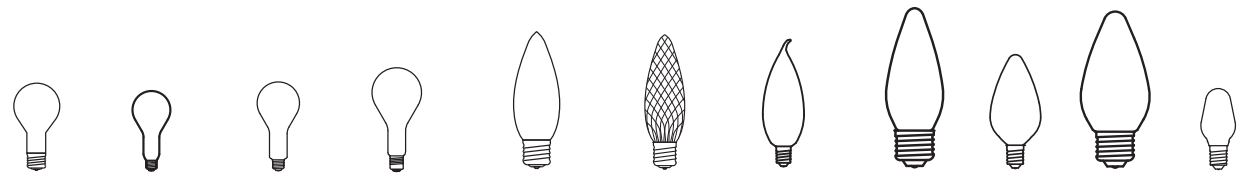
INCANDESCENT LAMP SHAPES

A bulb designation consists of a letter(s) to indicate the shape and a figure to indicate the approximate major diameter in eighths of an inch. For example, an F-15 bulb is a flame-shape, 15/8 of an inch or 1-7/8 inches in diameter.


A15 Med, A19 Med, A21 Med, A21 3C Med, A23 Med, G16.5 Cand, G16.5 Med, G25 Med, G30 Med, G40 Med


R14 Inter, R14 Med, R16 Med, R20 Med, S6 Cand, S6 DC Bay, S11 DC Bay, S11 Inter, S14 Med


T6 Cand, T6.5 Inter, T6.5 DC Bay, T7 Cand, T7 DC Bay, T7 Inter, T8 Cand, T8 DC Bay, T8 Inter, T10 Med


PS25 3C Mog, PS25 Med, PS30 Med, PS35 Mog, B10 Blunt Tip, B10 Crystal, B10 Cand, B13 Cand, F10, F15 Med, C7 Cand


BR30 Med, BR40 Med, ER30 Med, R40 Med Skrt, PAR38 Med Skrt

Specifications subject to change without notice.

HOW TO READ PRODUCT INFORMATION – INCANDESCENT

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes

Bulb	Describes the shape of the envelope followed by the lamp's major diameter given in eighths of an inch. See page 31: Incandescent Lamps.
Base	See page 30: Base Identification.
Symbols & Footnotes	All symbols and footnotes that apply to a specific product will appear in this space. The explanations of the symbols and footnotes are at the end of the incandescent section.
Ordering Abbreviation	A text description of the lamp. See below for several examples and explanations of some of the codes.
Lumens, Beam Angle, CBCP	These columns may contain data for any of these values.

HOW TO READ ORDERING ABBREVIATIONS

40B10C/CRYSTAL/DL/BL/2PK	
40	Nominal lamp wattage
B	Bulb shape
10	Bulb size in 8th's of an inch
C	Candelabra base
CRYSTAL	Crystal texture on bulb glass
DL	Double Life lamp
BL	Blister pack
2PK	2 lamps per package

60A/DL/SW/2PK/RP	
60	Nominal lamp wattage
A	Bulb shape
DL	Double Life lamp
SW	Soft white
2PK	2 lamps per package
RP	Retail pack

65BR30/DL/FL/RP	
65	Nominal lamp wattage
BR	Bulb shape
30	Bulb size in 8th's of an inch
DL	Double Life lamp
FL	Flood beam pattern
RP	Retail pack

A19 Med

GENERAL PURPOSE INCANDESCENT

Incandescent A-Line Lamps for General Illumination, Task and Accent Lighting

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
DOUBLElife™ Incandescent A-Line Lamps													
40	4.44	Medium	10939	40A/DLSW/4PK/RP 120V	120	48	Soft White	3000	2850 100	390	CC-8	1/1/14	●,🧢
60	4.44	Medium	11204	60A/DLSW/4PK/RP 120V	120	48	Soft White	2000	2850 100	770	CC-8	1/1/14	●,🧢
			11227	60A/DLSW/2PK/RP 120V	120	24	Soft White	2000	2850 100	770	CC-8	1/1/14	●,🧢
			11260	60ACL/DL/RP 120V	120	24	Clear	2000	2850 100	790	CC-8	1/1/14	●,🧢
General Purpose Incandescent A-Line Lamps													
25	3.94	Medium	10562	25A/W/RP 120V	120	24	Soft White	2500	2850 100	160	C-9	Exempt	●,🧢
			10634	25A/RP 120V	120	24	Inside Frost	2500	2850 100	190	C-9	Exempt	●,🧢
			10644	25A 120V	120	120	Inside Frost	2500	2850 100	190	C-9	Exempt	●,🧢
			10645	25A 130V	130	120	Inside Frost	2500	2850 100	180	C-9	Exempt	●,🧢
25	3.94	Medium Brass	10694	25A/CL 130V	130	120	Clear	2500	2850 100	180	C-9	Exempt	🧢
34	4.44	Medium	11058	40A/34/SS 120V 4PK	120	48	Standard Frost	1500	2850 100	375	CC-8	1/1/14	●,🧢
			11379	40A/34/SS 130V 4PK	130	48	Standard Frost	1500	2850 100	375	CC-8	1/1/14	●,🧢
34	4.44	Medium Brass	11387	40A/34/SS/XL 130V 4PK	130	48	Standard Frost	2500	2850 100	310	CC-8	1/1/14	🧢
40	4.44	Medium	10996	40A/W/4/RP 120V 4PK	120	48	Soft White	1500	2850 100	465	CC-8	1/1/14	●,🧢
			10977	40A/W/RP 120V 2PK	120	24	Soft White	1500	2850 100	465	CC-8	1/1/14	●,🧢
			11223	40A/CL/RP 120V 2PK	120	24	Clear	1500	2850 100	480	CC-8	1/1/14	●,🧢
			11036	40A/CL 130V	130	120	Clear	1500	2850 100	460	CC-8	1/1/14	●,🧢
			11010	40A/RP 120V 2PK	120	24	Standard Frost	1500	2850 100	470	CC-8	1/1/14	●,🧢
			11060	40A/4/RP 120V 4PK	120	48	Standard Frost	1500	2850 100	470	CC-8	1/1/14	●,🧢
			11011	40A/CVP 130V	130	24	Standard Frost	1500	2850 100	460	CC-8	1/1/14	●,🧢
			11059	40A 130V 4PK	130	48	Standard Frost	1500	2850 100	460	CC-8	1/1/14	●,🧢
			10864	40A/DAY/RP/4/48 120V	120	48	Daylight	1500	2900 100	350	CC-8	1/1/14	●,🧢
50	4.44	Medium	11428	50A 277V	277	120	Inside Frost	1000	2850 100	475	CC-7A	Exempt	●,🧢

A19 Med

A21 Med

GENERAL PURPOSE INCANDESCENT (CONT.)

Incandescent A-Line Lamps for General Illumination, Task and Accent Lighting (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
General Purpose Incandescent A-Line Lamps (Cont.)													
52	4.44	Medium	11376	60A/52/SS 120V	120	48	Standard Frost	1000	2850 100	750	CC-8	1/1/14	●,🧢
52	4.44	Medium Brass	11384	60A/52/SS/XL 120V	120	48	Standard Frost	2500	2850 100	620	CC-8	1/1/14	🧢
52	4.44	Medium	11380	60A/52/SS 130V	130	48	Standard Frost	1000	2850 100	710	CC-8	1/1/14	●,🧢
52	4.44	Medium Brass	11388	60A/52/SS/XL 130V	130	48	Standard Frost	2500	2850 100	610	CC-8	1/1/14	🧢
60	4.44	Medium	10553	60A/CL 120V	120	120	Clear	1000	2850 100	880	CC-8	1/1/14	●,🧢
			11224	60A/CL/RP 120V	120	24	Clear	1000	2850 100	880	CC-8	1/1/14	●,🧢
			10555	60A/CL 130V	130	120	Clear	1000	2850 100	855	CC-8	1/1/14	●,🧢
			10558	60A/CL/CVP 130V	130	24	Clear	1000	2850 100	855	CC-8	1/1/14	●,🧢
60	4.44	Medium Brass	10613	60A/SB 120V	120	120	Silverbowl	1000	2850 100	750	CC-8	1/1/14	🧢
60	4.44	Medium	11205	60A/W/4/RP 120V 4PK	120	48	Soft White	1000	2850 100	850	CC-8	1/1/14	●,🧢
			11208	60A/W/RP 120V 2PK	120	24	Soft White	1000	2850 100	850	CC-8	1/1/14	●,🧢
			11180	60A/4/RP 120V 4PK	120	48	Standard Frost	1000	2850 100	870	CC-8	1/1/14	●,🧢
			11214	60A/RP 120V 2PK	120	24	Standard Frost	1000	2850 100	870	CC-8	1/1/14	●,🧢
			10489	60A/CVP 130V	130	24	Standard Frost	1000	2850 100	855	CC-8	1/1/14	●,🧢
			11373	60A 130V	130	48	Standard Frost	1000	2850 100	855	CC-8	1/1/14	●,🧢
			11463	60A/DAY/RP/4/48 120V	120	48	Daylight	1000	2900 100	640	CC-8	1/1/14	●,🧢
67	4.44	Medium	11377	75A/67/SS 120V	120	48	Standard Frost	750	2850 100	1020	CC-8	1/1/14	●,🧢
67	4.44	Medium Brass	11385	75A/67/SSXL 120V	120	48	Standard Frost	2500	2850 100	880	CC-8	1/1/14	🧢
67	4.44	Medium	11381	75A/67/SS 130V	130	48	Standard Frost	750	2850 100	1020	CC-8	1/1/14	●,🧢
67	4.44	Medium Brass	11389	75A/67/SSXL 130V	130	48	Standard Frost	2500	2850 100	860	CC-8	1/1/14	🧢
75	5.31	Medium Brass	11566	75A21 12V	12	24	Inside Frost	1000	2850 100	1420	C-6	Exempt	🧢
100	5.31	Medium	13218	100A21/VS 130V	130	48	Inside Frost	1000	2850 100	1340	C-9	Exempt	●,🧢

A21 Med

A23 Med

Incandescent A-Line Lamps for General Illumination, Task and Accent Lighting (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
General Purpose Incandescent A-Line Lamps (Cont.)													
100	5.31	Medium	13404	100A21 230V	230	24	Inside Frost	1000	2850 100	1260	C-9	Exempt	●,🔔
			13406	100A21 250V	250	24	Inside Frost	1000	2850 100	1230	C-9	Exempt	●,🔔
			13397	100A21 277V	277	24	Inside Frost	1000	2850 100	1040	C-7A	Exempt	●,🔔
150	5.31	Medium	13101	150A21/W/RP 120V	120	12	Soft White	750	2850 100	2640	CC-8	Exempt	●,🔔
			13125	150A21/CL/RP 120V	120	12	Clear	750	2850 100	2740	CC-8	Exempt	●,🔔
			13148	150A21/CL 130V	130	48	Clear	750	2850 100	2730	CC-8	Exempt	●,🔔
150	6.06	Medium	13041	150A23 120V	120	48	Inside Frost	750	2850 100	2810	CC-8	Exempt	●,🔔
200	5.31	Medium	13103	200A21/W/1RP 120V	120	12	Soft White	750	2850 100	3650	CC-8	Exempt	●,🔔
			15476	200A21/CL/RP 120V	120	12	Clear	750	2850 100	3880	CC-8	Exempt	●,🔔
			15491	200A21/CL 130V	130	48	Clear	750	2850 100	3880	CC-8	Exempt	●,🔔
200	5.31	Medium Brass	15555	200A21/99/XL 125V	125	48	Standard Frost	2500	2850 100	2910	CC-8	Exempt	🔔
200	5.31	Medium	15543	200A21 130V	130	48	Standard Frost	750	2850 100	3760	CC-8	Exempt	●,🔔
3-WAY Incandescent Lamps													
15 135 150	5.31	3CONTACT Med. Alum.	18009	15/150A/SECURITYLIGHT 120V	120	12	Soft White	1200	2850 100	80 270 2150	CC-8	Exempt	▼,●,🔔
30 70 100	5.31	3CONTACT Med. Alum.	19365	30/100A21/DLSW/2/24 120V	120	24	Soft White	2400	2850 100	270 830 1100	CC-8	Exempt	▼,●,🔔
			19380	30/100A21/DLSW/RP 120V	120	12	Soft White	2400	2850 100	270 830 1100	CC-8	Exempt	▼,●,🔔
			19385	30/100A21/W/RP 120V	120	12	Soft White	1200	2850 100	290 915 1205	CC-8	Exempt	▼,●,🔔
50 200 250	5.31	3CONTACT Med. Alum.	19404	50/250A21/W/RP 120V	120	12	Soft White	1200	2850 100	580 3300 3880	CC-8	Exempt	▼,●,🔔
50 100 150	5.31	3CONTACT Med. Alum.	18044	50/150A21/DLSW/RP 120V	120	12	Soft White	2400	2850 100	510 1280 1790	CC-8	Exempt	▼,●,🔔
			18458	50/150A21/W/2PK/12 120V	120	12	Soft White	1200	2850 100	580 1540 2120	CC-8	Exempt	▼,●,🔔
			18060	50/150A21/W/RP 120V	120	12	Soft White	1200	2850 100	580 1540 2120	CC-8	Exempt	▼,●,🔔


A21 Med


PS25


PS30


PS35

GENERAL PURPOSE INCANDESCENT (CONT.)

Incandescent A-Line Lamps for General Illumination, Task and Accent Lighting (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
3-WAY Incandescent Lamps (Cont.)													
50 100 150	5.31	3CONTACT Med. Alum.	18110	50/150/DAY/1/12 120V	120	12	Daylight	1200	2900 100	460 1170 1630	CC-8	Exempt	▼,●,🧢
			18167	50/150A21/DLSW/2/24 120V	120	24	Soft White	2400	2850 100	510 1280 1790	CC-8	Exempt	▼,●,🧢
100 200 300	6.94	3CONTACT Mogul	15845	100/300PS25/1/6/RP 120V	120	6	Inside Frost	1200	2850 100	1385 3540 4925	CC-8	Exempt	▼,●,🧢

Incandescent PS25, PS30, PS35 Lamps

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent PS25 Lamps													
150	6.94	Medium Brass	15293	150PS25/SL 120V	120	60	Safeline	1000	2850 100	2200	C-9	Exempt	🧢,10
150	5.94	Medium Brass	15300	150PS25/RS/SL 120V	120	60	Safeline	1000	2850 100	2145	C-17	Exempt	🧢,10
200	6.94	Medium Brass	15818	200PS25/99/XL 130V	130	60	Inside Frost	2500	2850 100	3000	CC-6	Exempt	🧢,4
202	6.94	Medium Brass	15581	202PS25/CL 125V	125	60	Clear	6000	2850 100	2750	C-9	Exempt	🧢,4
Incandescent PS30, PS35 Lamps													
200	8.06	Medium Brass	15725	200PS/CL/99/XL 130V	130	60	Clear	2500	2850 100	2875	C-9	Exempt	🧢,4
200	8.06	Medium	15653	200PS/IF 130V	130	60	Inside Frost	750	2850 100	3560	C-9	Exempt	●,🧢,4
			15675	200PS/23 130V	130	60	Inside Frost	1000	2850 100	3080	C-9	Exempt	●,🧢,4
200	8.06	Medium Brass	15648	200PS/SL 120V	120	60	Safeline	1000	2850 100	3080	C-9	Exempt	🧢,4
300	8.06	Medium	15740	300M/CL/RP 120V	120	12	Clear	750	2850 100	5870	C-9	Exempt	●,🧢,4
			15742	300M/CL 120V	120	60	Clear	750	2850 100	5870	C-9	Exempt	●,🧢,4
			15744	300M/CL 130V	130	60	Clear	750	2850 100	5820	C-9	Exempt	●,🧢,4
			15735	300M/IF/RP 120V	120	12	Inside Frost	750	2850 100	5860	C-9	Exempt	●,🧢,4
			15737	300M/IF 120V	120	60	Inside Frost	750	2850 100	5860	C-9	Exempt	●,🧢,4
			15738	300M/IF/CVP/6 130V	130	6	Inside Frost	750	2850 100	5760	C-9	Exempt	●,🧢,4
			15739	300M/IF 130V	130	60	Inside Frost	750	2850 100	5760	C-9	Exempt	●,🧢,4


PS30


PS35


S6


S11

Incandescent PS25, PS30, PS35 Lamps (Cont.)

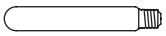
Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent PS30, PS35 Lamps (Cont.)													
300	8.06	Medium Brass	15761	300M/IF/99/XL 130V	130	60	Inside Frost	2500	2850 100	4990	C-9	Exempt	,4
300	9.38	Mogul	15915	300PS35/CL 120V	120	24	Clear	1000	2850 100	5700	C-9	Exempt	●,,4
			15917	300PS35/CL 130V	130	24	Clear	1000	2850 100	5250	C-9	Exempt	●,,4
			16068	300PS35/CL 277V	277	24	Clear	1000	2850 100	4220	C-7A	Exempt	●,,4
			15918	300PS35/IF 120V	120	24	Inside Frost	1000	2850 100	5700	C-9	Exempt	●,,4
			15920	300PS35/IF 130V	130	24	Inside Frost	1000	2850 100	5250	C-9	Exempt	●,,4
500	9.38	Mogul	16034	500PS35/CL 130V	130	24	Clear	1000	2850 100	10000	CC-8	Exempt	●,,4
			16040	500PS35/IF 130V	130	24	Inside Frost	1000	2850 100	10000	CC-8	Exempt	●,,4

Incandescent S6, S11, S14 Lamps

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent S6 Lamps													
3	1.88	Candelabra	16759	3S6 130V	130	240	Clear	3000	2850 100	12	C-7A	Exempt	●,
6	1.88	Candelabra	16930	6S6/CL30V	30	120	Clear	1500	2850 100	45	C-7A	Exempt	●,
			16960	6S6/CL 120V	120	120	Clear	1500	2850 100	40	C-7A	Exempt	●,
			16938	6S6/CL 130V	130	120	Clear	1500	2850 100	40	C-7A	Exempt	●,
6	1.81	BA15d DC Bayonet	16784	6S6DC 130V	130	120	Clear	1500	2850 100	40	C-9	Exempt	●,
Incandescent S11 Lamps													
7.5	2.25	Medium	19353	7.5S 120V	120	120	Clear	1400	2850 100	45	C-9	Exempt	●,
			19355	7.5S 130V	130	120	Clear	1400	2850 100	45	C-9	Exempt	●,
			19421	7.5S/CW/BL/1/6 120V	120	6	White	1400	2850 100	30	C-9	Exempt	●,
			19433	7.5S/CW/BL 120V	120	12	White	1400	2850 100	30	C-9	Exempt	●,
10	2.31	Intermediate	16919	10S11N/CL 130V	130	120	Clear	1500	2850 100	70	C-7A	Exempt	●,
30	2.38	BA15d DC Bayonet	10765	30S11DC75V	75	120	Clear	500	2850 100	280	C-7A	Exempt	●,


S11


S14


T6


T7


T8

GENERAL PURPOSE INCANDESCENT (CONT.)

Incandescent S6, S11, S14 Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent S11 Lamps (Cont.)													
40	2.31	Intermediate	13607	40S11N/BL 120V	120	12	Clear	500	2850 100	440	C-7A	Exempt	●,🧢
			13644	40S11N/BL/2/12 120V	120	12	Clear	500	2850 100	440	C-7A	Exempt	●,🧢
Incandescent S14 Lamps													
11	3.50	Medium Brass	17450	11S14 130V	130	120	Clear	3000	2850 100	70	C-9	Exempt	🧢

Incandescent T6, T7, T8, T10 Lamps

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent T6 Lamps													
15	3.06	Candelabra	18037	15T6 120V	120	60	Clear	2000	2850 100	110	C-7A	Exempt	●,🧢
			18038	15T6 130V	130	60	Clear	2000	2850 100	105	C-7A	Exempt	●,🧢
			18078	15T6145V	145	60	Clear	2000	2850 100	110	C-7A	Exempt	●,🧢
20	5.50	Intermediate	18143	20T6.5/IF 120V	120	60	Inside Frost	10000	2850 100	90	C-8	Exempt	●,🧢
20	5.56	BA15d DC Bayonet	18144	20T6.5DC/IF 120V	120	60	Inside Frost	10000	2850 100	90	C-8	Exempt	●,🧢
25	5.50	Intermediate	18125	25T6.5 120V	120	60	Clear	1000	2850 100	240	C-8	Exempt	●,🧢
			18495	25T6.5/BL/6PK 120V	120	6	Clear	1000	2850 100	240	C-8	Exempt	●,🧢
			18128	25T6.5 130V	130	60	Clear	1000	2850 100	240	C-8	Exempt	●,🧢
			18111	25T6.5/IF 130V	130	60	Inside Frost	1000	2850 100	225	C-8	Exempt	●,🧢
40	5.50	Intermediate	18152	40T6.5/CL/BL/6PK 120V	120	6	Clear	1000	2850 100	365	C-8	Exempt	●,🧢
Incandescent T7 Lamps													
15	2.25	Candelabra	18185	15T7C 120V	120	60	Clear	1000	2850 100	110	C-7A	Exempt	●,🧢
15	2.25	Intermediate	18174	15T7N/BL 120V	120	12	Clear	1000	2850 100	115	C-7A	Exempt	●,🧢
15	2.25	BA15d DC Bayonet	18200	15T7DC/BL 120V	120	12	Clear	1000	2850 100	110	C-7A	Exempt	●,🧢,9
25	2.63	Candelabra	18289	25T8C 120V	120	60	Clear	1000	2850 100	230	C-7A	Exempt	●,🧢,9
25	2.63	Intermediate	18360	25T8N/BL/1/6 120V	120	6	Clear	1000	2850 100	230	C-7A	Exempt	●,🧢,9

T8

T10

Incandescent T6, T7, T8, T10 Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent T7 Lamps (Cont.)													
25	2.63	Intermediate	18365	25T8N/BL 120V	120	12	Clear	1000	2850 100	230	C-7A	Exempt	●,,9
25	2.63	BA15d DC Bayonet	18310	25T8DC 120V	120	60	Clear	1000	2850 100	230	C-7A	Exempt	●,,9
			18321	25T8DC/BL 120V	120	12	Clear	1000	2850 100	230	C-7A	Exempt	●,,9
			18316	25T8DC 130V	130	60	Clear	1000	2850 100	215	C-7A	Exempt	●,,9
Incandescent T10 Lamps													
25	5.63	Medium	18491	25T10/CL/BL/6PK 120V	120	6	Clear	1000	2850 100	230	C-8	Exempt	●,
			18510	25T10 120V	120	60	Clear	1000	2850 100	230	C-8	Exempt	●,
			18512	25T10 130V	130	60	Clear	1000	2850 100	230	C-8	Exempt	●,
			18492	25T10/IF/BL/6PK 120V	120	6	Inside Frost	1000	2850 100	230	C-8	Exempt	●,
			18503	25T10/IF 120V	120	60	Inside Frost	1000	2850 100	230	C-8	Exempt	●,
			18505	25T10/IF 130V	130	60	Inside Frost	1000	2850 100	230	C-8	Exempt	●,
40	5.63	Medium	18493	40T10/CL/BL/6PK 120V	120	6	Clear	1000	2850 100	420	C-8	Exempt	●,
			18652	40T10 130V	130	60	Clear	1000	2850 100	420	C-8	Exempt	●,
			18494	40T10/IF/BL/6PK 120V	120	6	Inside Frost	1000	2850 100	415	C-8	Exempt	●,
			18669	40T10/IF 130V	130	60	Inside Frost	1000	2850 100	415	C-8	Exempt	●,
60	5.63	Medium	18710	60T10/64 120V	120	60	Clear	1000	2850 100	655	C-8	Exempt	▼,●,
			18712	60T1064BL 120V	120	6	Clear	1000	2850 100	655	C-8	Exempt	▼,●,
			18711	60T10/CF 120V	120	60	Inside Frost	1000	2850 100	630	C-8	Exempt	▼,●,

SPECIALTY INCANDESCENT

Incandescent A15 Lamps for for Utility, Fan, Appliance and Garage Lighting Applications

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
DOUBLElife™ in italics Incandescent A15 Lamps													
40	3.50	Medium	11664	40A15/DL/SW/BL/2/24 120V	120	24	Soft White	2000	2850 100	310	C-9	Exempt	●,🧢
			10034	40A15/CL/DL/FAN/2/12/BL 120V	120	12	Clear	2000	2850 100	350	C-9	Exempt	●,🧢,13
			10133	40A15/DL/CL/APPL/BL 120V	120	12	Clear	2000	2850 100	350	C-9	Exempt	●,🧢
			10061	40A15/CL/DL/APPL/2/12/BL 120V	120	12	Clear	2000	2850 100	350	C-9	Exempt	●,🧢
60	3.50	Medium	10868	60A15/DL/SW/BL/2/24 120V	120	24	Soft White	2000	2850 100	510	C-9	Exempt	●,🧢
			10040	60A15/CL/DL/FAN/2/12/BL 120V	120	12	Clear	2000	2850 100	530	C-9	Exempt	●,🧢,13
			10048	60A15/CL/DL/FAN/RP 120V	120	24	Clear	2000	2850 100	530	C-9	Exempt	●,🧢,13
Standard Incandescent A15 Lamps													
15	3.50	Medium	10018	15A15/CL 120V	120	120	Clear	2500	2850 100	105	C-9	Exempt	●,🧢
			10019	15A15/CL 130V	130	120	Clear	2500	2850 100	105	C-9	Exempt	●,🧢
			10031	15A15/RP 120V	120	24	Inside Frost	2500	2850 100	100	C-9	Exempt	●,🧢
			10037	15A15 120V	120	120	Inside Frost	2500	2850 100	100	C-9	Exempt	●,🧢
			10038	15A15 130V	130	120	Inside Frost	2500	2850 100	100	C-9	Exempt	●,🧢
			10015	15A15/W/RP 120V	120	24	Soft White	2500	2500 100	65	C-9	Exempt	●,🧢
30	3.50	Medium Brass	10122	30A15 130V	130	120	Inside Frost	2000	2850 100	200	C-9	Exempt	🧢
40	3.50	Medium	10042	40A15/CL/FAN 120V	120	24	Clear	1000	2850 100	430	C-9	Exempt	●,🧢,13
			10036	40A15/CL/FAN/2/12/BL 120V	120	12	Clear	1000	2850 100	430	C-9	Exempt	●,🧢,13
			10141	40A15/2PK/RP 120V	120	24	Clear	1000	2850 100	430	C-9	Exempt	●,🧢
			10181	40A15/DAY/FAN/BL/2/24 120V	120	24	Daylight	1000	2900 100	340	C-9	Exempt	●,🧢,13
			10082	40A15/SL 120V	120	120	Inside Frost	1000	2850 100	410	C-9	Exempt	●,🧢
			10117	40A15/IF/BL 120V	120	12	Inside Frost	1000	2850 100	410	C-9	Exempt	●,🧢
			10119	40A15 120V	120	120	Inside Frost	1000	2850 100	410	C-9	Exempt	●,🧢
			11533	40A15/SWFAN/2/12/BL 120V	120	12	Soft White	1000	2850 100	405	C-9	Exempt	●,🧢,13


A15


A19 Med


A21 Med

Incandescent A15 Lamps for for Utility, Fan, Appliance and Garage Lighting Applications (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Standard Incandescent A15 Lamps (Cont.)													
40	3.38	Candelabra	11534	40A15C/SW/FAN/2/12/BL 120V	120	12	Soft White	1000	2850 100	350	C-9	Exempt	●,,13
			10029	40A15C/CL/FAN/2/12/BL 120V	120	12	Clear	1000	2850 100	375	C-9	Exempt	●,,13
40	3.50	Medium	10066	40A15/CL/APPL/2/12/BL 120V	120	12	Clear	1000	2850 100	430	C-9	Exempt	●,
			10129	40A15/CL/APPL/BL 120V	120	12	Clear	1000	2850 100	430	C-9	Exempt	●,
60	3.50	Medium	10884	60A15CL/FAN/2/12/BL 120V	120	12	Clear	1000	2850 100	700	C-9	Exempt	●,,13
			11007	60A15/CL/FAN/RP 120V	120	24	Clear	1000	2850 100	700	C-9	Exempt	●,,13
60	3.38	Candelabra	10894	60A15C/CL/FAN/2/12/BL 120V	120	12	Clear	1000	2850 100	650	C-9	Exempt	●,,13
60	3.50	Medium	10162	60A15/DAY/FAN/BL/2/24 120V	120	24	Daylight	1000	2900 100	560	C-9	Exempt	●,,13
			10885	60A15/SWFAN/2/12/BL 120V	120	12	Soft White	1000	2850 100	680	C-9	Exempt	●,,13
60	3.38	Candelabra	10777	60A15C/SW/FAN/2/12/BL 120V	120	12	Soft White	1000	2850 100	625	C-9	Exempt	●,,13
60	3.50	Medium Brass	10886	60A15/GARAGE/2/12/BL 120V	120	12	Inside Frost	1000	2850 100	700	C-9	Exempt	,

Incandescent SAFELINE®, Rough Service and other Specialty Lamps

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
SAFELINE Incandescent A-Line Lamps													
75	5.31	Medium	12554	75A21/RS/SL/RP 120V	120	12	Safeline	1000	2850 100	800	C-9	Exempt	●,,10
100	5.31	Medium Brass	12834	100A21/SL 120V	120	48	Safeline	750	2850 100	1675	CC-8	Exempt	,10
			12992	100A21/RS/SL/RP 120V	120	12	Safeline	1000	2850 100	1260	C-9	Exempt	,10
Rough Service Incandescent A-Line Lamps													
50	4.44	Medium Brass	11068	50A19/RS 75V	75	120	Inside Frost	1000	2850 100	505	C-9	Exempt	,
50	4.44	Medium	14070	50A/RS/2/RP 120V	120	24	Inside Frost	1000	2850 100	510	C-9	Exempt	●,
60	4.44	Medium	12977	60A/RS/RP/1 120V	120	12	Inside Frost	1000	2850 100	555	C-9	Exempt	●,
			13000	60A/RS/2/RP 120V	120	24	Inside Frost	1000	2850 100	555	C-9	Exempt	●,
60	4.44	Medium Brass	13021	60A/RS/XL 120V	120	24	Inside Frost	5000	2850 100	450	C-9	Exempt	,


A19 Med


A23 Med

SPECIALTY INCANDESCENT (CONT.)

Incandescent SAFELINE, Rough Service and other Specialty Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT / CRI	Lumens	Filament	Legislation Impact	Notes
Rough Service Incandescent A-Line Lamps (Cont.)													
60	4.44	Medium	12420	60A/RS/2/RP 130V	130	24	Inside Frost	1000	2850 / 100	555	C-9	Exempt	●,🧢
60	4.44	Medium Brass	12455	60A/RS/XL 130V	130	24	Inside Frost	5000	2850 / 100	450	C-9	Exempt	🧢
60	4.44	Medium	10503	60A/RS/SL/RP 120V	120	12	Safeline	1000	2850 / 100	555	C-9	Exempt	●,🧢,10
75	4.44	Medium	12579	75A/RS/RP/1 120V	120	12	Inside Frost	1000	2850 / 100	815	C-9	Exempt	●,🧢
			13001	75A/RS/2/RP 120V	120	24	Inside Frost	1000	2850 / 100	815	C-9	Exempt	●,🧢
75	4.44	Medium Brass	13022	75A/RS/XL 120V	120	24	Inside Frost	5000	2850 / 100	650	C-9	Exempt	🧢
			12528	75A/RS/XL 130V	130	24	Inside Frost	5000	2850 / 100	700	C-9	Exempt	🧢
75	4.44	Medium	12586	75A/RS/RP/1 130V	130	24	Inside Frost	1000	2850 / 100	815	C-9	Exempt	●,🧢
100	4.44	Medium	12998	100A/RS/2/RP 130V	130	24	Inside Frost	1000	2850 / 100	1260	C-9	Exempt	●,🧢
			12997	100A/RS/RP/1 120V	120	12	Inside Frost	1000	2850 / 100	1260	C-9	Exempt	●,🧢
			13002	100A/RS/2/RP 120V	120	24	Inside Frost	1000	2850 / 100	1260	C-9	Exempt	●,🧢
100	4.44	Medium Brass	13023	100A/RS/XL 120V	120	24	Inside Frost	5000	2850 / 100	840	C-9	Exempt	🧢
			12559	100A/RS/XL 130V	130	24	Inside Frost	5000	2850 / 100	1040	C-9	Exempt	🧢
150	6.06	Medium	15243	150A23/RS 130V	130	48	Inside Frost	1000	2850 / 100	2090	C-17	Exempt	●,🧢
200	5.88	Medium	15458	200A23/RS 130V	130	48	Inside Frost	1000	2850 / 100	2920	C-17	Exempt	●,🧢
200	6.06	Medium	15505	200A23 120V	120	48	Inside Frost	750	2850 / 100	3930	CC-8	Exempt	●,🧢
Other Specialty Incandescent A-Line Lamps													
25	3.94	Medium Brass	11714	25A19/TG/RP 125V	125	6	Green	3000	2850 / 100	180	C-9	Exempt	🧢
			11710	25A19/TB/RP 125V	125	6	Blue	3000	2850 / 100	180	C-9	Exempt	🧢
			11712	25A19/TR/RP 125V	125	6	Red	3000	2850 / 100	180	C-9	Exempt	🧢
			11713	25A19/TY/RP 125V	125	6	Yellow - Buglight	3000	2850 / 100	180	C-9	Exempt	🧢
60	4.44	Medium	10390	60A/Y/RP 120V	120	24	Yellow - Buglight	1000	– / –	–	CC-8	Exempt	●,🧢
			10386	60A/Y/RP 130V	130	24	Yellow - Buglight	1000	– / –	–	CC-8	Exempt	●,🧢


R14


R14


R20


A19 Med

Incandescent SAFELINE, Rough Service and other Specialty Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Other Specialty Incandescent A-Line Lamps (Cont.)													
100	4.44	Medium	12763	100A/Y/RP 120V	120	24	Yellow - Buglight	1000	– –	1140	CC-8	Exempt	●,🧢
60	4.44	Medium	10094	60A19/OBLUE 120V	120	12	Blue	1000	2850 100	705	C-9	Exempt	●,🧢
			10576	60A/SPK 120V	120	24	Soft Pink	1000	2850 100	560	CC-8	Exempt	●,🧢
			12280	60A/GRO 120V	120	6	Spotgro	1000	– –	705	C-9	Exempt	●,🧢
			11715	60A/BLACKLIGHT/RP 120V	120	6	Blacklight	1000	– –	–	CC-8	Exempt	2

DIRECTIONAL INCANDESCENT LAMPS

Incandescent R14, R20 and R40 Reflector Lamps

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent R14 Reflector Lamps													
25	2.25	Medium	14818	25R14/RP 120V	120	6	Reflector	1500	2850 100	130	CC-2V	Exempt	●,🧢
25	2.56	Intermediate	14784	25R14N/RP 120V	120	6	Reflector	1500	2850 100	130	CC-2V	Exempt	●,🧢
			14793	25R14N 120V	120	60	Reflector	1500	2850 100	130	CC-2V	Exempt	●,🧢
40	2.25	Medium	14819	40R14/RP 120V	120	6	Reflector	1500	2850 100	185	C-9	Exempt	●,🧢
40	3.88	Medium	14821	40R16/FL/RP 120V	120	6	Reflector	1500	2850 100	235	C-9	Exempt	●,🧢
40	2.56	Intermediate	14820	40R14N/RP 120V	120	6	Reflector	1500	2850 100	185	CC-2V	Exempt	●,🧢
Incandescent R20 Reflector Lamps													
30	3.94	Medium Brass	14794	30R20 120V	120	60	Reflector	2000	2850 100	140	C-9	Exempt	🧢
			14836	30R20/RP 120V	120	6	Reflector	2000	2850 100	140	C-9	Exempt	🧢
			14802	30R20 130V	130	60	Reflector	2000	2850 100	140	C-9	Exempt	🧢
45	3.94	Medium Brass	15698	45R20/DL/RP 120V	120	6	Reflector	4000	2850 100	235	C-9	Exempt	🧢
45	3.94	Medium	14997	45R20/RP/2/12 120V	120	12	Reflector	2000	2850 100	245	C-9	Exempt	●,🧢
			15670	45R20/RP 120V	120	6	Reflector	2000	2850 100	245	C-9	Exempt	●,🧢


R20


R40


BR30

DIRECTIONAL INCANDESCENT LAMPS (CONT.)

Incandescent R14, R20 and R40 Reflector Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent R20 Reflector Lamps (Cont.)													
45	3.94	Medium	15677	45R20/DAY/1/6/RP 120V	120	6	Reflector-Daylight	2000	2900 100	215	C-9	Exempt	●,⛑
			15697	45R20 120V	120	60	Reflector	2000	2850 100	245	C-9	Exempt	●,⛑
			15676	45R20/CVP 130V	130	6	Reflector	2000	2850 100	230	C-9	Exempt	●,⛑
			15699	45R20/130V	130	60	Reflector	2000	2850 100	230	C-9	Exempt	●,⛑
Incandescent B40 Reflector Lamps													
250	6.875	Medium	14663	250R40 120V	120	6	Reflector	5000	2900 100	–	C-6	Exempt	●,⛑,2
375	7.625	Medium Skirted	14747	375R40/1 120V	120	24	Reflector	5000	2850 100	–	C-11	Exempt	●,⛑,2

Incandescent BR30, BR40 and ER30 Reflector Lamps

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent BR30 Reflector Lamps													
45	4.38	Medium	15103	45BR30/FL/RP 120V	120	6	Reflector	2000	2850 100	350	CC-6	Exempt	●,⛑
65	5.38	Medium	10211	65BR30/OBLUE/IC 120V	120	12	Blue Reflector	2000	2850 100	350	CC-6	Exempt	●,⛑,1,3
			10212	65BR30/OPINK/IC 120V	120	12	Pink Reflector	2000	2850 100	350	CC-6	Exempt	●,⛑,1,3
			15148	65BR30/TRAY 120V	120	48	Reflector	2000	2850 100	600	CC-6	Exempt	●,⛑,1,3
			15153	65BR30/PK/RP 120V	120	6	Pink Reflector	2000	2850 100	350	CC-6	Exempt	●,⛑,1,3
			15149	65BR30/SP/RP 120V	120	6	Reflector	2000	2850 100	350	CC-6	Exempt	●,⛑,1,3
			15160	65BR30/FL/RP 120V	120	6	Reflector	2000	2850 100	600	CC-6	Exempt	●,⛑,1,3
			15165	65BR30/FL 120V	120	24	Reflector	2000	2850 100	600	CC-6	Exempt	●,⛑,1,3
			15177	65BR30/DL/FL/RP 120V	120	6	Reflector	4000	2850 100	485	CC-6	Exempt	●,⛑,1,3
			15223	65BR30/DAY/1/6/RP 120V	120	6	Reflector	2000	2850 100	420	CC-6	Exempt	●,⛑,1,3
			15234	65BR30/FL/3/24 120V	120	24	Reflector	2000	2850 100	600	CC-6	Exempt	●,⛑,1,3
			15246	65BR30/2/24/RP 120V	120	24	Reflector	2000	2850 100	600	CC-6	Exempt	●,⛑,1,3
			13129	65BR30/FL 130V	130	24	Reflector	2000	2850 100	540	CC-6	Exempt	●,⛑,1,3


BR30


BR40


ER30


PAR38 Med Skrt

Incandescent BR30, BR40 and ER30 Reflector Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent BR30 Reflector Lamps (Cont.)													
65	5.38	Medium	15167	65BR30/FL/SL/RP 130V	130	6	Reflector	2000	2850 100	530	CC-6	Exempt	●,,1,3
			15172	65BR30/FL/CVP 130V	130	6	Reflector	2000	2850 100	540	CC-6	Exempt	●,,1,3
			15408	65BR30/FL/CVP/12PK 130V	130	12	Reflector	2000	2850 100	540		Exempt	●,,1,3
65	6.50	Medium	15487	65BR/FL/DAY/1/6RP 120V	120	6	Reflector	2000	2900 100	480	CC-6	Exempt	●,,1,3,4
65	6.50	Medium Brass	15332	65BR/DL/FL/RP 120V	120	6	Reflector	4000	2850 100	510	CC-6	Exempt	,1,3,4
65	6.50	Medium	15678	65BR/FL/RP 120V	120	6	Reflector	2000	2850 100	580	CC-6	Exempt	●,,1,3,4
			15292	65BR/FL 130V	130	24	Reflector	2000	2850 100	540	CC-6	Exempt	●,,1,3,4
			15679	65BR/CVP 130V	130	6	Reflector	2000	2850 100	540	CC-6	Exempt	●,,1,3,4
120	6.50	Medium	15836	120BR/GROW/3/RP 120V	120	3	Reflector	2000	2850 100	–	CC-6	Exempt	●,,1,3,4
125	6.50	Medium	15451	125BR40HEAT24PK 120V	120	24	Reflector	4000	– –	–	C-9	Exempt	●,,1,3,4
250	6.50	Medium Brass	14664	250BR40/1 120V	120	6	Reflector	5000	2850 100	2000	CC-6	Exempt	,1,3,4
300	6.50	Medium Brass	14779	300BR/FL 120V	120	24	Reflector	2000	2850 100	3030	CC-2V	Exempt	,1,3,4
Incandescent ER30 Reflector Lamps													
50	6.38	Medium	15102	50ER30 120V	120	24	Reflector	2000	2850 100	350	CC-6	Exempt	●,,
			15110	50ER30/RP 120V	120	6	Reflector	2000	2850 100	350	CC-6	Exempt	●,,
			15107	50ER30 130V	130	24	Reflector	2000	2850 100	320	CC-6	Exempt	●,,
Incandescent PAR38 Heat Lamps													
100	4.44	Medium Skirted	13849	100PAR38/HEAT/RED 120V	120	15	Red	5000	2850 –	–	–	Exempt	●,,2
175	4.44	Medium Skirted	13840	175PAR38/HEAT/RED 120V	120	15	Red	5000	2850 100	–	–	Exempt	●,,2
175	5.31	Medium Skirted	13836	175PAR38/HEAT/CL 120V	120	15	Clear	5000	2850 100	–	CC-6	Exempt	●,,2


B10


C7 Cand

DECORATIVE INCANDESCENT LAMPS

Incandescent C7 Night Lights

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
4	2.13	Candelabra	13498	4C7/CR/BL/4PK 120V	120	48	Crystal	3000	2850 100	15	C-9	Exempt	●,🧢
			13542	4C7/BL/2PK 120V	120	24	Clear	3000	2850 100	15	C-9	Exempt	●,🧢
			13523	4C7/DL/BL/4PK 120V	120	48	Clear	6000	2850 100	14	C-9	Exempt	●,🧢
			13549	4C7/BL/4PK 120V	120	48	Clear	3000	2850 100	15	C-9	Exempt	●,🧢
			13553	4C7/W/BL/4PK 120V	120	48	White	3000	2850 100	15	C-7	Exempt	●,🧢
7	2.13	Candelabra	13543	7C7/BL/2PK 120V	120	24	Clear	3000	2850 100	40	C-9	Exempt	●,🧢
			13545	7C7/BL/4PK 120V	120	48	Clear	3000	2850 100	40	C-9	Exempt	●,🧢
			13608	7C7 120V	120	120	Clear	3000	2850 100	40	C-9	Exempt	●,🧢
			13609	7C7 130V	130	120	Clear	3000	2850 100	40	C-9	Exempt	●,🧢
			13540	7C7/W/BL/2PK 120V	120	24	White	3000	2850 100	30	C-9	Exempt	●,🧢
			13544	7C7/W/BL/4PK 120V	120	48	White	3000	2850 100	30	C-9	Exempt	●,🧢
10	2.13	Candelabra	13636	10C7/CL 120V	120	240	Clear	3000	2850 100	35	C-7A	Exempt	●,🧢

Incandescent B10 & B13 Lamps

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent B10 Bent & Blunt Tip													
15	3.88	Candelabra	13657	15B10CBAGPK 120V	120	200	Clear	1500	2850 100	70	C-7A	Exempt	▼,●,🧢
			13307	15B10C/DL/BL/4PK 120V	120	24	Clear	3000	2850 100	65	C-7A	Exempt	▼,●,🧢
			13448	15B10C/BL/2PK 120V	120	12	Clear	1500	2850 100	65	C-7A	Exempt	▼,●,🧢
15	3.63	Candelabra	13675	15B10C/T/BL/2PK 120V	120	12	Clear	1500	2850 100	70	C-7A	Exempt	▼,●,🧢
15	3.88	Candelabra	13315	15B10C/DL/BL 120V	120	12	Clear	3000	2850 100	65	C-7A	Exempt	▼,●,🧢
15	3.81	Medium	13433	15B10/BL/2PK 120V	120	12	Clear	1500	2850 100	70	C-7A	Exempt	▼,●,🧢
15	3.56	Medium	13715	15B10/T/BL/2PK 120V	120	12	Clear	1500	2850 100	70	C-7A	Exempt	▼,●,🧢
25	3.88	Candelabra	13306	25B10C/DL/BL/4PK 120V	120	24	Clear	3000	2850 100	150	C-7A	Exempt	▼,●,🧢

B10

Incandescent B10 & B13 Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent B10 Bent & Blunt Tip (Cont.)													
25	3.88	Candelabra	13316	25B10C/DL/BL 120V	120	12	Clear	3000	2850 100	150	C-7A	Exempt	▼,●,🧢
			13452	25B10C/BL/2PK 120V	120	12	Clear	1500	2850 100	175	C-7A	Exempt	▼,●,🧢
			13647	25B10C/BL/4PK 120V	120	24	Clear	1500	2850 100	175	C-7A	Exempt	▼,●,🧢
			13452	25B10C/BL/2PK 120V	120	12	Clear	1500	2850 100	175	C-7A	Exempt	▼,●,🧢
25	3.63	Candelabra	13678	25B10C/T/BL/2PK 120V	120	12	Clear	1500	2850 100	175	C-7A	Exempt	▼,●,🧢
25	3.81	Medium	13318	25B10/DL/BL 120V	120	12	Clear	3000	2850 100	150	C-7A	Exempt	▼,●,🧢
			13331	25B10/DL/BL/4PK 120V	120	24	Clear	3000	2850 100	150	C-7A	Exempt	▼,●,🧢
			13438	25B10/BL/2PK 120V	120	12	Clear	1500	2850 100	175	C-7A	Exempt	▼,●,🧢
			13654	25B10/BL/4PK 120V	120	24	Clear	1500	2850 100	175	C-7A	Exempt	▼,●,🧢
25	3.56	Medium	13717	25B10/T/BL/2PK 120V	120	12	Clear	1500	2850 100	175	C-7A	Exempt	▼,●,🧢
25	4.44	Candelabra	13748	25B10C/CRYSTAL/DL/BL/4/24 120V	120	24	Crystal	3000	2850 100	150	C-7A	Exempt	▼,●,🧢
25	3.88	Candelabra	13308	25B10C/DLF/BL/4PK 120V	120	24	Frosted	3000	2850 100	145	C-7A	Exempt	▼,●,🧢
			13317	25B10C/DLF/BL 120V	120	12	Frosted	3000	2850 100	145	C-7A	Exempt	▼,●,🧢
			13453	25B10C/F/BL/2PK 120V	120	12	Frosted	1500	2850 100	145	C-7A	Exempt	▼,●,🧢
25	3.81	Medium	13439	25B10/F/BL/2PK 120V	120	12	Frosted	1500	2850 100	165	C-7A	Exempt	▼,●,🧢
25	4.44	Candelabra	13395	25B10C/F/BL/4PK 120V	120	24	Frosted	1500	2850 100	165	C-7A	Exempt	▼,●,🧢
40	3.88	Candelabra	13319	40B10C/DL/BL/2PK 120V	120	12	Clear	3000	2850 100	320	C-7A	Exempt	▼,●,🧢
40	3.81	Medium	13321	40B10/DL/BL/2PK 120V	120	12	Clear	3000	2850 100	320	C-7A	Exempt	▼,●,🧢
40	3.88	Candelabra	13328	40B10C/DL/BL/4PK 120V	120	24	Clear	3000	2850 100	320	C-7A	Exempt	▼,●,🧢
40	3.88	Medium	13332	40B10/DL/BL/4PK 120V	120	24	Clear	2250	2850 100	320	C-7A	Exempt	▼,●,🧢
40	3.81	Medium	13440	40B10/BL/2PK 120V	120	12	Clear	1500	2850 100	340	C-7A	Exempt	▼,●,🧢
40	3.88	Candelabra	13456	40B10C/BL/2PK 120V	120	12	Clear	1500	2850 100	360	C-7A	Exempt	▼,●,🧢
			13648	40B10C/BL/4PK 120V	120	24	Clear	1500	2850 100	400	C-7A	Exempt	▼,●,🧢

B10

DECORATIVE INCANDESCENT LAMPS (CONT.)

Incandescent B10 & B13 Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent B10 Bent & Blunt Tip (Cont.)													
40	3.81	Medium	13651	40B10/BL/4PK 120V	120	24	Clear	1500	2850 100	360	C-7A	Exempt	▼,●,⛰
40	3.63	Candelabra	13681	40B10C/T/BL/2PK 120V	120	12	Clear	1500	2850 100	360	C-7A	Exempt	▼,●,⛰
40	3.56	Medium	13719	40B10/T/BL/2PK 120V	120	12	Clear	1500	2850 100	360	C-7A	Exempt	▼,●,⛰
40	3.88	Candelabra	13714	40B10C/CRYSTAL/DL/BL/4/24 120V	120	24	Crystal	3000	2850 100	320	C-7A	Exempt	▼,●,⛰
			13741	40B10C/CRYSTAL/DL/BL/2PK 120V	120	12	Crystal	3000	2850 100	320	C-7A	Exempt	▼,●,⛰
			13751	40B10C/DAY/2PK/BL 120V	120	12	Daylight	1500	2850 100	305	C-7A	Exempt	▼,●,⛰
40	3.88	Medium	15354	40B10/DAY/2PK/BL 120V	120	12	Daylight	1500	2850 100	305	C-7A	Exempt	▼,●,⛰
40	3.88	Candelabra	13309	40B10C/DLF/BL/4PK 120V	120	24	Frosted	3000	2850 100	300	C-7A	Exempt	▼,●,⛰
			13320	40B10C/DLF/BL/2PK 120V	120	12	Frosted	3000	2850 100	300	C-7A	Exempt	▼,●,⛰
40	3.81	Medium	13322	40B10/DLF/BL/2PK 120V	120	12	Frosted	3000	2850 100	300	C-2V	Exempt	▼,●,⛰
			13441	40B10/F/BL/2PK 120V	120	12	Frosted	1500	2850 100	340	C-7A	Exempt	▼,●,⛰
40	3.88	Candelabra	13457	40B10C/F/BL/2PK 120V	120	12	Frosted	1500	2850 100	340	C-7A	Exempt	▼,●,⛰
			13396	40B10C/F/BL/4PK 120V	120	24	Inside Frost	1500	2850 100	255	C-7A	Exempt	▼,●,⛰
60	3.81	Medium	13254	60B10/DL/BL/4PK 120V	120	24	Clear	3000	2850 100	575	C-7A	Exempt	▼,●,⛰
			13323	60B10/DL/BL/2PK 120V	120	12	Clear	3000	2850 100	575	C-7A	Exempt	▼,●,⛰
			13442	60B10/BL/2PK 120V	120	12	Clear	1500	2850 100	635	C-7A	Exempt	▼,●,⛰
60	3.88	Candelabra	13460	60B10C/BL/2PK 120V	120	12	Clear	1500	2850 100	635	C-7A	Exempt	▼,●,⛰
			13649	60B10C/BL/4PK 120V	120	24	Clear	1500	2850 100	635	C-7A	Exempt	▼,●,⛰
60	3.81	Medium	13650	60B10/BL/4PK 120V	120	24	Clear	1500	2850 100	635	C-7A	Exempt	▼,●,⛰
60	3.63	Candelabra	13684	60B10C/T/BL/2PK 120V	120	12	Clear	1500	2850 100	635	C-7A	Exempt	▼,●,⛰
60	3.88	Candelabra	13705	60B10C/DL/BL/4PK 120V	120	24	Clear	3000	2850 100	575	C-7A	Exempt	▼,●,⛰
60	3.56	Medium	13721	60B10/T/BL/2PK 120V	120	12	Clear	1500	2850 100	600	C-7A	Exempt	▼,●,⛰
60	3.88	Candelabra	13777	60B10C/DL/BL/2PK 120V	120	12	Clear	3000	2850 100	575	C-7A	Exempt	▼,●,⛰


B10


B13


F10


F15 Med

Incandescent B10 & B13 Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent B10 Bent & Blunt Tip (Cont.)													
60	3.88	Candelabra	13750	60B10C/DAY/2PK/BL 120V	120	12	Daylight	1500	2900 100	535	C-7A	Exempt	▼,●,🧢
60	3.81	Medium	13324	60B10/DLF/BL/2PK 120V	120	12	Frosted	3000	2850 100	545	C-2V	Exempt	▼,●,🧢
			13443	60B10/F/BL/2PK 120V	120	12	Frosted	1500	2850 100	600	C-2V	Exempt	▼,●,🧢
60	3.88	Candelabra	13461	60B10C/F/BL/2PK 120V	120	12	Frosted	1500	2850 100	600	C-7A	Exempt	▼,●,🧢
			13778	60B10C/DLF/BL/2PK 120V	120	12	Frosted	3000	2850 100	545	C-7A	Exempt	▼,●,🧢
			13754	60B10C/DLF/BL/4PK 120V	120	24	Frosted	3000	2850 100	545	C-7A	Exempt	▼,●,🧢
60	5.31	Candelabra	13399	60B10C/F/BL/4PK 120V	120	24	Frosted	1500	2850 100	600	C-7A	Exempt	▼,●,🧢
Incandescent B13 Fan Lamps													
40	4.63	Medium	13367	40B13/FAN/BL/2PK 120V	120	12	Clear	1500	2850 100	455	C-9	Exempt	▲,●,🧢,13,14
			13369	40B13/DL/FAN/BL/2PK 120V	120	12	Clear	3000	2850 100	455	C-9	Exempt	▲,●,🧢,13,14
			13785	40B13/CRYSTAL/FAN/BL/2PK 120V	120	12	Crystal	1500	2850 100	455	C-9	Exempt	▲,●,🧢,13,14
40	4.00	Candelabra	13357	40B13C/CL/FAN/2/12/BL 120V	120	12	Clear	1500	2850 100	360	C-9	Exempt	▲,●,🧢,13,14
60	4.63	Medium	13368	60B13/FAN/BL/2PK 120V	120	12	Clear	1500	2850 100	650	C-9	Exempt	▲,●,🧢,13,14
			13370	60B13/DL/FAN/BL/2PK 120V	120	12	Clear	3000	2850 100	650	C-9	Exempt	▲,●,🧢,13,14
60	4.00	Candelabra	13263	60B13C/CL/FAN/2/12/BL 120V	120	12	Clear	1500	2850 100	650	C-9	Exempt	▲,●,🧢,13,14

Incandescent F10, F15 Flame Lamps

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
15	3.06	Candelabra	13434	15FC/IC/BL/2PK 120V	120	12	Iridescent	1500	2850 100	90	C-7A	Exempt	▲,●,🧢,14
25	4.50	Medium	13823	25F/AIC/BL/2PK 120V	120	12	Amber Iridescent	1500	2850 100	0	C-7A	Exempt	▲,●,🧢,14
			13821	25F/IC/BL/2PK 120V	120	12	Iridescent	1500	2850 100	205	C-7A	Exempt	▲,●,🧢,14
			13820	25F/W/BL/2PK 120V	120	12	Soft White	1500	2850 100	170	C-7A	Exempt	▲,●,🧢,14
			13986	40F/AIC/BL/2PK 120V	120	12	Amber Iridescent	1500	2850 100	335	C-7A	Exempt	▲,●,🧢,14


F10


F15 Med


G16.5

DECORATIVE INCANDESCENT LAMPS (CONT.)

Incandescent F10, F15 Flame Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
40	4.50	Medium	13974	40F/CL 120V	120	24	Clear	1500	2850 100	340	C-7A	Exempt	▲●,,14
			13985	40F/IC/BL/2PK 120V	120	12	Iridescent	1500	2850 100	335	C-7A	Exempt	▲●,,14
			13984	40F/W/BL/2PK 120V	120	12	White	1500	2850 100	325	C-7A	Exempt	▲●,,14
60	4.50	Medium	13992	60F/BL 120V	120	12	Clear	1500	2850 100	690	C-7A	Exempt	▲●,,14
			13993	60F/CL 120V	120	24	Clear	1500	2850 100	690	C-7A	Exempt	▲●,,14
			13982	60F/IC/BL/2PK 120V	120	12	Iridescent	1500	2850 100	590	C-7A	Exempt	▲●,,14

Incandescent Globe Lamps

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent G16.5 Globe													
15	3.00	Candelabra	13616	15G16.5C 120V	120	24	Clear	1500	2850 100	110	C-7A	Exempt	●,,14
			13709	15G16.5C/4M 120V	120	24	Clear	4000	2850 100	90	C-7A	Exempt	●,,14
25	3.00	Candelabra	13704	25G16.5C/4M 120V	120	24	Clear	4000	2850 100	170	C-7A	Exempt	●,,14
25	3.00	Medium	10298	25G16.5/BL 120V	120	12	Clear	1500	2850 100	180	C-7A	Exempt	●,,14
25	3.00	Candelabra	13618	25G16.5C 120V	120	24	Clear	1500	2850 100	180	C-7A	Exempt	●,,14
			13625	25G16.5C/BL 120V	120	12	Clear	1500	2850 100	180	C-7A	Exempt	●,,14
25	3.00	Medium	10297	25G16.5/W/BL 120V	120	12	Soft White	1500	2850 100	165	C-7A	Exempt	●,,14
25	3.00	Candelabra	13622	25G16.5C/W/BL 120V	120	12	Soft White	1500	2850 100	165	C-7A	Exempt	●,,14
40	3.00	Medium	10300	40G16.5/BL 120V	120	12	Clear	1500	2850 100	330	C-7A	Exempt	●,,14
40	3.00	Candelabra	13666	40G16.5C/BL 120V	120	12	Clear	1500	2850 100	330	C-7A	Exempt	●,,14
			13702	40G16.5C 120V	120	24	Clear	1500	2850 100	330	C-7A	Exempt	●,,14
			10367	40G16.5C/DAY/2PK/BL 120V	120	12	Daylight	1500	2900 100	260	C-7A	Exempt	●,,14
40	3.00	Medium	10299	40G16.5/W/BL 120V	120	12	Soft White	1500	2850 100	280	C-7A	Exempt	●,,14
40	3.00	Candelabra	13667	40G16.5C/W/BL 120V	120	12	Soft White	1500	2850 100	280	C-7A	Exempt	●,,14

G16.5

G25

Incandescent Globe Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent G16.5 Globe (Cont.)													
60	3.00	Medium	10302	60G16.5/BL 120V	120	12	Clear	1500	2850 100	560	C-7A	Exempt	▼,●,🧢
			10301	60G16.5/W/BL/2PK 120V	120	12	Soft White	1500	2850 100	550	C-7A	Exempt	▼,●,🧢
60	3.00	Candelabra	13664	60G16.5C/W/BL 120V	120	12	Soft White	1500	2850 100	550	C-2	Exempt	▼,●,🧢
			13665	60G16.5C/BL 120V	120	12	Clear	1500	2850 100	560	C-2	Exempt	▼,●,🧢
Incandescent G25 Globe													
25	4.44	Medium	14264	25G25 120V	120	24	Clear	1500	2850 100	165	C-9	Exempt	●,🧢
			14276	25G25/4M 120V	120	24	Clear	4000	2850 100	155	C-9	Exempt	●,🧢
			14282	25G25/RP 120V	120	6	Clear	1500	2850 100	165	C-9	Exempt	●,🧢
			14145	25G25/DL/RP 120V	120	6	Clear	3000	2850 100	145	C-9	Exempt	●,🧢
			14265	25G25/W 120V	120	24	Soft White	1500	2850 100	150	C-9	Exempt	●,🧢
			14286	25G25/W/RP 120V	120	6	Soft White	1500	2850 100	150	C-9	Exempt	●,🧢
			14146	25G25/DLSW/RP 120V	120	6	Soft White	3000	2850 100	145	C-9	Exempt	●,🧢
40	4.44	Medium	14147	40G25/DL/RP 120V	120	6	Clear	3000	2850 100	290	C-9	Exempt	●,🧢
			14266	40G25 120V	120	24	Clear	1500	2850 100	300	C-9	Exempt	●,🧢
			14283	40G25/RP 120V	120	6	Clear	1500	2850 100	300	C-9	Exempt	●,🧢
			15335	40G25/DL/3PK/24 120V	120	24	Clear	3000	2850 100	290	C-9	Exempt	●,🧢
			14191	40G25/CVP/130V	130	6	Clear	1500	2850 100	300	C-9	Exempt	●,🧢
			13966	40G25/DAY/1/6 120V	120	6	Daylight	1500	2900 100	160	C-9	Exempt	●,🧢
			14148	40G25/DLSW/RP 120V	120	6	Soft White	3000	2850 100	265	C-9	Exempt	●,🧢
			14267	40G25/W 120V	120	24	Soft White	1500	2850 100	260	C-9	Exempt	●,🧢
			14287	40G25/W/RP 120V	120	6	Soft White	1500	2850 100	260	C-9	Exempt	●,🧢
			15345	40G25/DLSW/3PK/24 120V	120	24	Soft White	3000	2850 100	265	C-9	Exempt	●,🧢
			14190	40G25/W/CVP130V	130	6	Soft White	1500	2850 100	260	C-9	Exempt	●,🧢


G25


G30


G40

DECORATIVE INCANDESCENT LAMPS (CONT.)

Incandescent Globe Lamps (Cont.)

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
Incandescent G25 Globe (Cont.)													
60	4.44	Medium	14261	60G25/RP 120V	120	6	Clear	1500	2850 100	550	C-9	Exempt	●,🔔
			14149	60G25/DL/RP 120V	120	6	Clear	3000	2850 100	525	C-9	Exempt	●,🔔
			13967	60G25/DAY/1/6 120V	120	6	Daylight	1500	2900 100	325	C-9	Exempt	●,🔔
			14150	60G25/DLSW/RP 120V	120	6	Soft White	3000	2850 100	460	C-9	Exempt	●,🔔
			14262	60G25/W/RP 120V	120	6	Soft White	1500	2850 100	475	C-9	Exempt	●,🔔
Incandescent G30 Globe													
60	5.5	Medium	14406	60G30/W/RP 120V	120	6	Soft White	2500	2850 100	675	C-9	Exempt	●,🔔
Incandescent G40 Globe													
25	6.94	Medium	14685	25G40 120V	120	6	Clear	2500	2850 100	160	C-9	Exempt	●,🔔
40	6.94	Medium	14619	40G40/RP 120V	120	6	Clear	2500	2850 100	350	C-9	Exempt	●,🔔
			14620	40G40/W/RP 120V	120	6	Soft White	2500	2850 100	335	C-9	Exempt	●,🔔
60	6.94	Medium	14621	60G40/RP 120V	120	6	Clear	2500	2850 100	575	C-9	Exempt	●,🔔
			15792	60G40/W/3/RP 120V	120	3	Soft White	2500	2850 100	490	C-9	Exempt	●,🔔
100	6.94	Medium	15794	100G40/3/RP 120V	120	3	Clear	2500	2850 100	1230	C-9	Exempt	●,🔔
			15793	100G40/W/3/RP 120V	120	3	Soft White	2500	2850 100	1050	C-9	Exempt	●,🔔


A19


A21


A23

TRAFFIC SIGNAL LIGHTS

Nominal Wattage	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Finish	Avg Rated Life (hrs)	CCT CRI	Lumens	Filament	Legislation Impact	Notes
54	4.44	Medium Brass	10441	54A19TS/8M/SS 120V-125V	120	120	Clear	8000	2850 100	515	C-11V	Exempt	▼,,6
60	4.44	Medium Brass	10442	60A19TS/8M/SS 120-125V	120	120	Clear	8000	2850 100	595	C-11V	Exempt	▼,,6
90	4.44	Medium Brass	11151	90A19/TS/8M/SS 120V-125V	120	120	Clear	8000	2850 100	1000	C-11V	Exempt	▼,,6
67	4.44	Medium Brass	12572	67A21/40/8M 130V	130	24	Clear	8000	2850 100	610	C-9	Exempt	▼,,6
69	4.44	Medium Brass	12496	69A21/TS/8M 120V	120	24	Clear	8000	2850 100	640	C-9	Exempt	▼,,6
			12497	69A21/TS/8M 125V	125	24	Clear	8000	2850 100	665	C-9	Exempt	▼,,6
			12498	69A21/TS/8M 130V	130	24	Clear	8000	2850 100	640	C-9	Exempt	▼,,6
116	5.31	Medium Brass	12817	116A21/TS/8M 130V	130	24	Clear	8000	2850 100	1260	C-9	Exempt	▼,,6
135	5.31	Medium Brass	12843	135A21/TS/8M/SS 120-125V	120	24	Clear	8000	2850 100	1750	C-11V	Exempt	▼,,6
170	4.75	Medium Brass	15021	1950L/A23/8M 130V	130	60	Clear	8000	2850 100	1950	C-9	Exempt	▼,,6

NOTES FOR INCANDESCENT

Symbol	Description
●	Indicates aluminum base.
⌀	Do not operate in household sockets.
▼	Operate base down.
▲	Operate in any position.
▼	Operate base down to horizontal.
★	Heat resistant, hard glass.
I/O	PAR lamps are suitable for indoor and outdoor use.
⌀	Do not operate in paper lined sockets.
	This ECOLOGIC® lamp was designed to pass the Federal TCLP criteria for classification as non-hazardous waste in most states. Disposal regulations may vary; check local and state regulations.

Footnote	Description
1	Should not be used in equipment where base temperature will exceed 500ºF.
2	Designed for service other than illumination.
3	Operate only in porcelain sockets.
4	Should be shielded against moisture falling on bulb.
5	Not recommended for use in enclosed close-fitting housings.
6	Not for use in ceiling fan fixtures.
7	Per Title 20 Section 1605.3(m) of the California Code of Regulations, this lamp may not be sold or offered for sale in the state of California for use in traffic signals.
8	Indefinite long life. Designed for life in excess of 10,000 hours. In-service life depends upon burning conditions.
9	Average laboratory life is 200 hours for vacuum cleaner and 600 hours for sewing machine services.
10	Operation of lamp in any position other than base up may result in some loss of protective coating.
11	A protective shield must be used external to the lamp.
12	In base up operation, heat may eventually deteriorate paper-lined or plastic sockets.
13	For use in ceiling fans.
14	Can be operated in any position.
15	May not give satisfactory performance if any accessory lighting equipment touches the glass bulb.
16	For use only with heat-resisting connector and with bulb supported by bulb rim or metal shell of base.

CFLi

Table of Contents

CFLi LAMP SHAPES

A bulb designation consists of a letter(s) to indicate the shape and a figure to indicate the approximate major diameter in eighths of an inch. For example, an A19 bulb is an aline, 19/8 of an inch in diameter.


Aline


Micromini


Mini


Super mini


Twist


3-Way Twist


R20


BR30


BR40


PAR38


PAR38 HG


B10


G25


A15


Bullet

BASE IDENTIFICATION


Med Base


Candelabra


GU24

HOW TO READ PRODUCT INFORMATION – COMPACT FLUORESCENT

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT	CRI	Approx. Lumens at 25ºC/77ºF	Notes

Bulb	Describes the shape of the bulb.
Base	Base designations for compact fluorescent lamps are the NEMA designations.
Symbols & Footnotes	Most symbols and footnotes that apply to a specific product will appear in this space. The explanations of the symbols and footnotes are at the end of the compact fluorescent section.
Ordering Abbreviation	A text description of the lamp. Please see below for an example and explanation of the code.
NEMA Generic Designation	Designation assigned by NEMA (National Electrical Manufacturers Association).
CCT	Correlated Color Temperature. Measured in degrees Kelvin (K).
CRI	Color Rendering Index. A numbering system for rating the relative color rendering quality of a light source compared to a standard.
Initial Lumens	Initial lumens are measured when the lamp has been operating for 100 hours. Compact Fluorescent lamp lumens are measured at 25°C (77°F) and 35°C (95°F).

How to Read Ordering Abbreviations

CF23EL/MICRO/827/LS/RP2

CF	**Compact Fluorescent**
23	**Nominal lamp wattage**
EL	**Electronic Lamp**
MICRO	**Type of bulb**
827	**‘8’ denotes CRI in the 80’s. ‘27’ 2700K CCT**
LS	**Living Spaces™**
RP2	**Retail Two Pack**

LAMP DISPOSAL LABELING

The following information appears on the packages of fluorescent lamps.

Hg **LAMP CONTAINS MERCURY**

Manage in accordance with disposal laws
See www.lamprecycle.org or 1-866-666-6850

For weight and measurement information, please visit www.sylvania.com


A15


Bullet


A19


MICROMINI

GENERAL PURPOSE SELF-BALLASTED COMPACT FLUORESCENT LAMPS

A-Line Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
9	A15 Fan	4	Medium	28963	CF9EL/A15/BL2	10	8000	2700	82	450	7.3	$1.08	1,2,3,4
		4.75	Medium	28961	CF14EL/A19/827/RP	6	8000	2700	82	800	7.3	$1.69	1,2,3,4
14	A19	4.75	Medium	29468	CF14EL/A19/830	6	6000	3000	82	800	5.5	$1.69	1,2,3,4
		5	Medium	28958	CF14EL/A19/BUG/BL	5	6000	2700	82	N/A	5.5	$1.69	1,2,3,4
14	Bullet	5.5	Medium	29196	CF14EL/B/830/MED	6	6000	3000	82	700	5.5	$1.69	1,2,3,4

Living Spaces™ T2 Twist Compact Fluorescent Lamps (High R9>82) 12,000 Hour Life

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
5	MICROMINI	3.3	Medium	21095	CF5EL/MICRO/LS	6	12000	2700	≥ 84	250	11.0	$0.60	1,2,3,4
13	MICROMINI	3.7	Medium	29972	CF13EL/MICROMINI/827/LS/RP2	12	12000	2700	≥ 84	800	11.0	$1.57	1,2,3,4
13	MICROMINI	3.7	Candelabra	26938	CF13EL/MICRO/827/LS/C/BL2	12	12000	2700	≥ 84	800	11.0	$1.57	1,2,3,4
20	MICROMINI	4.29	Medium	29973	CF20EL/MICRO/827/LS/RP2	12	12000	2700	≥ 84	1200	11.0	$2.41	1,2,3,4
23	MICROMINI	4.45	Medium	29974	CF23EL/MICRO/827/LS/RP2	12	12000	2700	≥ 84	1400	11.0	$2.77	1,2,3,4

Micro Mini T2 Twist Compact Fluorescent Lamps 15,000 Hour Life

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
13	MICROMINI	3.7	Medium	26942	CF13EL/MICRO/827/15000HR/RP2	12	15000	2700	82	825	13.7	$1.57	1,2,3,4
20	MICROMINI	4.3	Medium	26924	CF20EL/MICRO/827/15000HR RP2	12	15000	2700	82	1300	13.7	$2.41	1,2,3,4
23	MICROMINI	4.5	Medium	26939	CF23EL/MICRO/827/15000HR RP2	12	15000	2700	82	1640	13.7	$2.77	1,2,3,4

Micro Mini T2 Twist Compact Fluorescent Lamps 12,000 Hour Life

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
5	MICROMINI	3.3	Candelabra	29133	CF5EL/MICRO/827/C	6	12000	2700	82	300	11.0	$0.60	1,2,3,4
10	MICROMINI	3.6	Medium	29401	CF10EL/MICRO/827/RP2	12	12000	2700	82	600	11.0	$1.20	1,2,3,4
13	MICROMINI	3.7	Medium	29727	CF13EL/MICRO/827/RP2	12	12000	2700	82	900	11.0	$1.57	1,2,3,4
13	MICROMINI	3.7	Candelabra	26941	CF13EL/MICRO/827/C/BL2	12	12000	2700	82	900	11.0	$1.57	1,2,3,4
13	MICROMINI	3.7	Medium	29898	CF13EL/MICRO/830/ECO	6	12000	3000	82	825	11.0	$1.57	1,2,3,4
13	MICROMINI	3.7	Candelabra	26932	CF13EL/MICRO/C/835/BL2	12	12000	3500	82	800	11.0	$1.57	1,2,3,4
13	MICROMINI	3.7	Medium	26929	CF13EL/MICRO/865/RP3	18	10000	6500	82	800	9.1	$1.57	1,2,3,4
13	MICROMINI	3.7	Candelabra	26936	CF13EL/MICRO/C/865/BL2	12	12000	6500	82	800	11.0	$1.57	1,2,3,4
20	MICROMINI	4.29	Medium	29728	CF20EL/MICRO/827/RP2	12	12000	2700	82	1300	11.0	$2.41	1,2,3,4

[1] Life in Years Based on 3 hours per day

[2] Cost per year based on 3 hours per day, $0.11 per kWh


MICROMINI


SUPER MINI

Micro Mini T2 Twist Compact Fluorescent Lamps 12,000 Hour Life (Cont.)

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
23	MICROMINI	4.45	Medium	29729	CF23EL/MICRO/827/RP2	12	12000	2700	82	1640	11.0	$2.77	1,2,3,4
				28952	CF23EL/MICROLED/827/HVP	4	12000	2700	82	1600	11.0	$2.77	1,2,3,4
				29901	CF23EL/MICRO/830/ECO	6	12000	3000	82	1640	11.0	$2.77	1,2,3,4
23	MICROMINI	4.45	Candelabra	26906	CF23EL/MICRO/C/827/BL2	24	12000	2700	82	1600	11.0	$2.77	1,2,3,4
26	MICROMINI	4.5	Medium	29026	CF26EL/MICRO/827/ECO	6	12000	2700	82	1750	11.0	$3.13	1,2,3,4

Micro Mini T2 Twist Compact Fluorescent Lamps 10,000 Hour Life

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
10	MICROMINI	3.6	Medium	26944	CF10EL/MICRO/827/RP3	18	10000	2700	82	600	9.1	$1.20	
13	MICROMINI	3.7	Medium	26943	CF13EL/MICRO/827/RP3	18	10000	2700	82	900	9.1	$1.57	1,2,3,4
				26927	CF13EL/MICRO/835/RP3	18	10000	3500	82	825	9.1	$1.57	1,2,3,4
				26929	CF13EL/MICRO/865/RP3	18	10000	6500	82	800	9.1	$1.57	1,2,3,4
20	MICROMINI	4.29	Medium	26925	CF20EL/MICRO/827/RP3	18	10000	2700	82	1300	9.1	$2.41	1,2,3,4
23	MICROMINI	4.45	Medium	28976	CF23EL/MICRO/827/RP3	18	10000	2700	82	1600	9.1	$2.77	1,2,3,4
				26928	CF23EL/MICRO/835/RP3	18	10000	3500	82	1630	9.1	$2.77	1,2,3,4
				28975	CF23EL/MICRO/865/RP3	18	10000	6500	82	1450	9.1	$2.77	1,2,3,4

Super Mini Twist Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
7	SUPER MINI	4.4	Medium	26920	CF7EL/SUPER/827/RP	6	10000	2700	82	375	9.1	$0.84	1,2,3,4
11		4.5	Medium	26921	CF11EL/SUPER/827/RP	6	10000	2700	82	600	9.1	$1.32	1,2,3,4
13	SUPER MINI	4.3	Medium	26912	CF13EL/SUPER/827/RP/12	12	10000	2700	82	875	9.1	$1.57	1,2,3,4
				26916	CF13EL/MINI/835/RP	6	8000	3500	82	800	7.3	$1.57	1,2,3,4
				29782	CF13EL/SUPER/850RP	6	10000	5000	82	800	9.1	$1.57	1,2,3,4
				26918	CF13EL/SUPER/865/RP	6	10000	6500	82	800	9.1	$1.57	1,2,3,4
		5.1	Medium	26913	CF19EL/SUPER/827/RP	12	10000	2700	82	1200	9.1	$2.29	1,2,3,4
23	SUPER MINI	5.1	Medium	26914	CF23EL/SUPER/827/RP	12	10000	2700	82	1600	9.1	$2.77	1,2,3,4
				26917	CF23EL/SUPER/835/RP	6	8000	3500	82	1600	7.3	$2.77	1,2,3,4
				29699	CF23EL/MINI/850/RP	6	10000	5000	82	1600	9.1	$2.77	1,2,3,4
				26919	CF23ELSUPER865RP	6	10000	6500	82	1500	9.1	$2.77	1,2,3,4

[1] Life in Years Based on 3 hours per day

[2] Cost per year based on 3 hours per day, $0.11 per kWh


SUPER MINI


TWIST

GENERAL PURPOSE SELF-BALLASTED COMPACT FLUORESCENT LAMPS (CONT.)

Super Mini Twist Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
7	MINI TWIST	4.4	Medium	29379	CF7EL/MINI/830	6	8000	3000	82	375	7.3	$0.84	1,2,3,4
11	MINI TWIST	4.5	Medium	29378	CF11EL/MINI/830	6	8000	3000	82	600	7.3	$1.32	1,2,3,4
13	MINI TWIST	4.3	Medium	29041	CF13EL/MINI/827/RP3	18	10000	2700	82	875	9.1	$1.57	1,2,3,4
				29120	CF13EL/MINI/827/CVP/6	6	10000	2700	82	875	9.1	$1.57	1,2,3,4
				29376	CF13EL/MINI/830	6	8000	3000	82	875	7.3	$1.57	1,2,3,4
				26916	CF13ELMINI835RP 6/CS 1/SKU	6	10000	3500	82	875	9.1	$1.57	1,2,3,4
				29780	CF13EL/MINI/835/DAY/RP3	18	10000	3500	82	875	9.1	$1.57	1,2,3,4
				29567	CF13EL/MINI/841	6	10000	4100	82	800	9.1	$1.57	1,2,3,4
				29722	CF13ELMINI865RP3	18	10000	6500	82	800	9.1	$1.57	1,2,3,4
13	MINI TWIST	4.1	GU24 Bi-Pin	28957	CF13EL/GU24/827/BL	5	8000	2700	82	800	7.3	$1.57	1,2,3,4
19	MINI TWIST	4.7	Medium	29726	CF19ELMINI827RP3	18	10000	2700	82	1250	9.1	$2.29	1,2,3,4
				29396	CF19EL/MINI/830	6	8000	3000	82	1200	7.3	$2.29	1,2,3,4
23	MINI TWIST	4.6	GU24 Bi-Pin	29947	CF23EL/GU24/827/BL	5	8000	2700	82	1600	7.3	$2.77	1,2,3,4
23	MINI TWIST	5.1	Medium	29694	CF23ELMINIRP3 120V	18	10000	2700	82	1600	9.1	$2.77	1,2,3,4
				29397	CF23EL/MINI/830	6	8000	3000	82	1600	7.3	$2.77	1,2,3,4
				29614	CF23EL/MINI/827/CVP	12	10000	2700	82	1600	9.1	$2.77	1,2,3,4
				29784	CF23EL/MINI/DAY/835/RP	6	8000	3500	82	1600	7.3	$2.77	1,2,3,4
				29564	CF23EL/MINI/841	6	10000	4100	82	1600	9.1	$2.77	1,2,3,4
				29721	CF23EL/MINI/865/RP3	18	10000	6500	82	1600	9.1	$2.77	1,2,3,4

Twist Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
30	TWIST	5.12	Medium	28967	CF30EL/TWIST/827/RP	6	10000	2700	82	2000	5.5	$3.61	1,2,3,4
				29395	CF30EL/TWIST/830	6	10000	3000	82	2000	9.1	$3.61	1,2,3,4
				29793	CF30EL/TWIST/DAY/835/RP	6	10000	3500	82	1845	9.1	$3.61	1,2,3,4
40	TWIST	6.38	Medium	28965	CF40EL/TWIST/827/RP/6	6	10000	2700	82	2600	9.1	$4.82	1,2,3,4
65	TWIST	7.85	Medium	29508	CF65EL/TWIST/841	6	8000	4100	82	4200	7.3	$7.83	1,2,3,4

Dimmable Twist Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
14	TWIST	5.03	Medium	29454	CF14EL/TWIST/827/DIM/BL	6	8000	2700	82	880	7.3	$1.69	1,2,3,5
23	TWIST	5.03	Medium	28946	CF23ELTWIST827DIMBASE*	4	8000	2700	82	1500	7.3	$2.77	1,2,3,5
24	TWIST	5.6	Medium	29453	CF24EL/TWIST/827/DIM/BL	6	8000	2700	82	1500	7.3	$2.89	1,2,3,5

[1] Life in Years Based on 3 hours per day

[2] Cost per year based on 3 hours per day, $0.11 per kWh

* NOT for dimming sockets. Dimmer is integrated within lamp base.

3-Way Twist Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
12 22 33	TWIST	5.28	Medium	29747	CF33EL/3WAY/827	6	10000	2700	82	1000 1200 2150	9.1	$1.45 $2.65 $3.97	1,2,3,4
12 22 33	TWIST	5.28	Medium	28974	CF33EL/3WAY/LS/827/BL	4	10000	2700	82	600 1200 1750	9.1	$1.45 $2.65 $3.97	1,2,3,4
12 22 33	TWIST	5.28	Medium	29913	CF33EL/3WAY/830/RP	6	10000	3000	82	600 1200 2150	9.1	$1.45 $2.65 $3.97	1,2,3,4
12 22 33	TWIST	5.28	Medium	26930	CF33EL/3WAY/835/BL	4	10000	3500	82	600 1200 2150	9.1	$1.45 $2.65 $3.97	1,2,3,4
12 22 33	TWIST	5.28	Medium	26933	CF33EL/3WAY/865/BL	4	10000	6500	82	540 1080 1935	9.1	$1.45 $2.65 $3.97	1,2,3,4
20 30 40	TWIST	5.5	Medium	27714	CF40EL/3WAY/827/RP	4	8000	2700	82	1000 2050 2650	7.3	$2.41 $3.62 $4.82	1,2,3,4

[1] Life in Years Based on 3 hours per day

[2] Cost per year based on 3 hours per day, $0.11 per kWh


R20


BR30


BR40


PAR38

DIRECTIONAL SELF-BALLASTED COMPACT FLUORESCENT LAMPS

R20 Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
9	R20	3.94	Medium	29638	CF9EL/R20/827	6	8000	2700	82	300	7.3	$1.08	1,2,3,4
14	R20	3.94	Medium	29562	CF14EL/R20/827/BL	5	8000	2700	82	500	7.3	$1.69	1,2,3,4
				29760	CF14EL/R20/827	6	8000	2700	82	500	7.3	$1.69	1,2,3,4

BR30 Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
15	BR30	5.7	Medium	28954	CF15EL/BR30/DIM/827/BL	3	8000	2700	82	700	7.3	$1.81	1,2,3,5
16 Living Spaces™	BR30	5.7	Medium	26937	CF16EL/BR30/LS/827/BL	3	8000	2700	82	650	7.3	$1.93	1,2,3,4
16	BR30	5.7	Medium	29440	CF16EL/BR30/827/BL	3	8000	2700	82	750	7.3	$1.93	1,2,3,4
				29566	CF16EL/BR30/827/RP	6	8000	2700	82	750	7.3	$1.93	1,2,3,4
				29573	CF16EL/BR30/827/CVP	4	8000	2700	82	750	7.3	$1.93	1,2,3,4
				29590	CF16EL/BR30/830	6	8000	3000	82	750	7.3	$1.93	1,2,3,4
				26931	CF16EL/BR30/835/RP	6	8000	3500	82	750	7.3	$1.93	1,2,3,4
				26934	CF16EL/BR30/865/RP	6	8000	6500	82	700	7.3	$1.93	1,2,3,4

BR40 Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
23 Living Spaces™	BR40	6.5	Medium	26926	CF23EL/BR40/LS/827/BL	3	8000	2700	82	1050	7.3	$2.77	1,2,3,4
23	BR40	6.5	Medium	26915	CF23EL/BR40/827/RP/6	6	10000	2700	82	1250	9.1	$2.77	1,2,3,4
				29452	CF23EL/BR40/827/RP	6	10000	2700	82	1250	9.1	$2.77	1,2,3,4
				29455	CF23EL/BR40/830	6	8000	3000	82	1250	7.3	$2.77	1,2,3,4

PAR38 Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
23	PAR38	6.25	Medium	29359	CF23EL/PAR38/827	6	8000	2700	82	1250	7.3	$2.77	1,2,3,4
				28956	CF23EL/PAR38/827/RP	6	8000	2700	82	1250	7.3	$2.77	1,2,3,4
				29635	CF23EL/PAR38/830	6	8000	3000	82	1200	7.3	$2.77	1,2,3,4
				26935	CF23EL/PAR38/865/RP	6	8000	6500	82	1200	7.3	$2.77	1,2,3,4
23 Hard Glass	PAR38	5.4	Medium	29956	CF23EL/PAR38/827/GL/RP	6	8000	2700	82	1000	7.3	$2.77	1,2,3,4
				28955	CF23EL/PAR38/GL/827/BL	3	8000	2700	82	1000	7.3	$2.77	1,2,3,4

[1] Life in Years Based on 3 hours per day

[2] Cost per year based on 3 hours per day, $0.11 per kWh

B10

B10 Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
5	B10	4.25	Candelabra	28964	CF5EL/B10/DIM/C/827/BL	6	25000	2700	82	200	22.8	$0.60	1,2,3,5
9	B10	4.25	Candelabra	28960	CF9EL/B10/827/C/BL2	10	8000	2700	82	450	7.3	$1.08	1,2,3,4
				29600	CF9EL/B10/C/830	6	8000	3000	82	450	7.3	$1.08	1,2,3,4

Globe Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg rated life (hrs)	CCT (K)	CRI	Approx. Lumens at 25ºC/77ºF	Life in Years[1]	Cost per Year[2]	Notes
9	G25	4.25	Medium	28959	CF9EL/G25/827/BL	4	8000	2700	82	495	7.3	$1.08	1,2,3,4
				29414	CF9EL/G25/827	6	8000	2700	82	495	7.3	$1.08	1,2,3,4
14	G25	4.25	Medium	28977	CF14EL/G25/827/BL	4	8000	2700	82	810	7.3	$1.69	1,2,3,4

[1] Life in Years Based on 3 hours per day
[2] Cost per year based on 3 hours per day, $0.11 per kWh

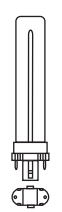
NOTES FOR CFLi Lamps

Footnote	Description
1	Approximate initial lumens after 100 hours operation.
2	Minimum starting temperature for DULUX® EL lamps is 0°F, unless otherwise specified in product literature.
3	DULUX ELs meet CSA, FCC and UL requirements.
4	DULUX EL units cannot be used on dimming circuits, emergency exit fixtures or lights, electronic timers, photocells, lighted switches or any other switches that do not meet UL20 Sec. 7.6.15. In outdoor applications, use only in enclosed fixtures to avoid exposure to weather. Use only on 120V, 60Hz circuits. Never disassemble or modify lamp. Install or remove unit from fixture by grasping plastic base.
5	This lamp can be used on SYLVANIA-approved dimming circuits.

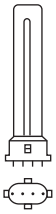
NOTES:

COMPACT FLUORESCENT LAMPS

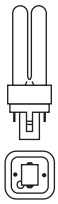
The overall length of DULUX® compact fluorescent lamps is measured from the bottom of the base to the outside edge of the glass. In many cases, the bottom of the base is the bottom of the center post of the base of the lamp.



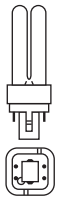
DULUX S



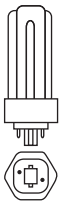
DULUX S/E



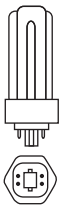
DULUX D



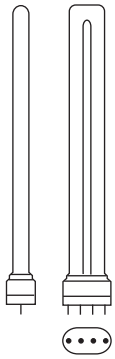
DULUX D/E



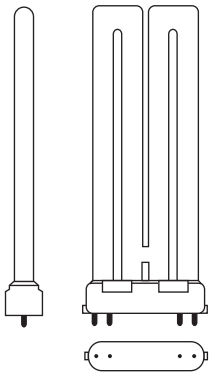
DULUX T



DULUX T/E
DULUX T/E/IN



DULUX L



DULUX F

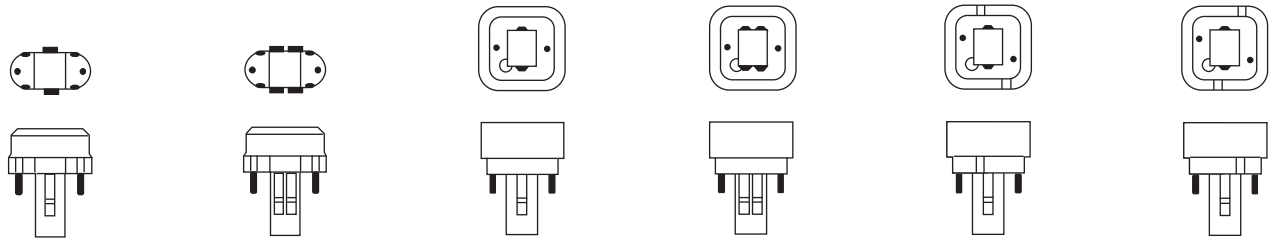
C
F
L

BASES

Pin-based compact fluorescent lamps have either 2 pins or 4 pins. Each 2-pin lamp has an internal starter and is designed for preheat, magnetic operation. The 4-pin lamps are designed for electronic ballast operation and are dimmable. These lamps have no internal starter; starting the lamps is a function of the ballast.

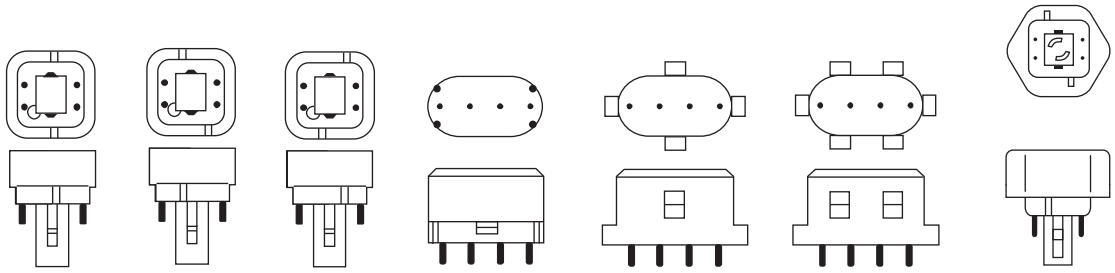
Medium screw base, compact fluorescent lamps have integral ballasts.

FOR CHOKE/STARTER OPERATION

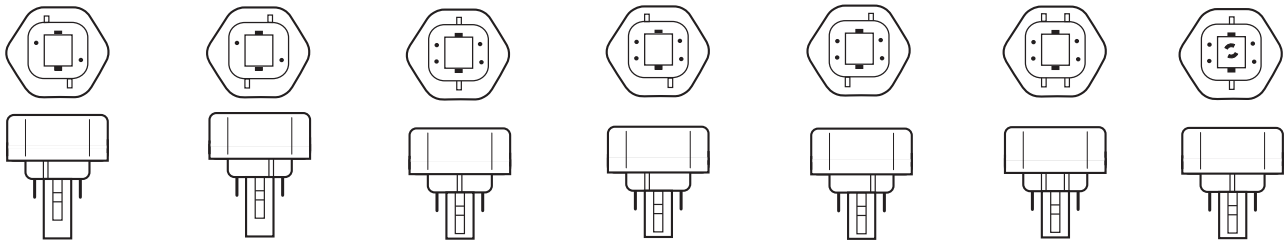


G 23 | GX 23 | G 23-2 | GX 23-2 | G 24 d2 | G24 d3

FOR ELECTRONIC OR DIMMING OPERATION



G 24 q-1 | G 24 q-2 | G 24 q-3 | 2 G 11 | 2 G 7 | 2 GX 7 | GX 24



GX 24 d-2 | GX 24 d-3 | GX 24 q-1 | GX 24 q-2 | GX 24 q-3 | GX 24 q-4 | GX 24 q-5

LAMP DISPOSAL LABELING

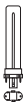
The following information appears on the packages of fluorescent lamps.

Hg LAMP CONTAINS MERCURY

Manage in accordance with disposal laws
See www.lamprecycle.org or 1-866-666-6850

For weight and measurement information, please visit www.sylvania.com


DULUX S/E


DULUX S

DULUX® S/E 4-Pin Single-Tube Compact Fluorescent

For Dimming and Electronic Ballast

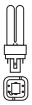
Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
5	S (T4)	3.35	85	2G7	20315	CF5DS/E/841	50	20000	4100	82	230 (210)	1,2,4,5,9
7	S (T4)	4.5	115	2G7	20312	CF7DS/E/827	50	20000	2700	82	400 (360)	1,2,4,5,9
					20316	CF7DS/E/841	50	20000	4100	82	400 (360)	1,2,4,5,9
9	S (T4)	5.7	145	2G7	20313	CF9DS/E/827	50	20000	2700	82	580 (520)	1,2,4,5,9
					20317	CF9DS/E/841	50	20000	4100	82	580 (520)	1,2,4,5,9
13	S (T4)	6.2	157	2GX7	20314	CF13DS/E/827	50	10000	2700	82	800 (720)	1,2,4,5,9
					20284	CF13DS/E/830	50	10000	3000	82	800 (720)	1,2,4,5,9
					20318	CF13DS/E/841	50	10000	4100	82	800 (720)	1,2,4,5,9

DULUX® S Preheat 2-Pin Single-Tube Compact Fluorescent

With Starter in Base for Magnetic Ballasts

Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
5	S (T4)	4.21	107	G23	21279	CF5DS/827/ECO	50	10000	2700	82	230 (210)	1,3,5,9,11
					21278	CF5DS/841/ECO	50	10000	4100	82	230 (210)	1,3,5,9,11
7	S (T4)	5.31	135	G23	21277	CF7DS/827/ECO	50	10000	2700	82	400 (360)	1,3,5,9,11
					21276	CF7DS/835/ECO	50	10000	3500	82	400 (360)	1,3,5,9,11
					21274	CF7DS/841/ECO	50	10000	4000	82	400 (360)	1,3,5,9,11
					21275	CF7DS/850/ECO	50	10000	5000	82	400 (360)	1,3,5,9,11
9	S (T4)	6.5	165	G23	21272	CF9DS/827/ECO	50	10000	2700	82	580 (520)	1,3,5,9,11
					21273	CF9DS/835/ECO	50	10000	3500	82	580 (520)	1,3,5,9,11
					21270	CF9DS/841/ECO	50	10000	4100	82	580 (520)	1,3,5,9,11
					21271	CF9DS/850/ECO	50	10000	5000	82	580 (520)	1,3,5,9,11
13	S (T4)	7.09	180	GX23	21136	CF13DS/827/ECO	50	10000	2700	82	800 (720)	1,3,5,9,11
					21133	CF13DS/830/ECO	50	10000	3000	82	800 (720)	1,3,5,9,11


DULUX S


DULUX D/E

DULUX® S Preheat 2-Pin Single-Tube Compact Fluorescent (Cont.)

With Starter in Base for Magnetic Ballasts

Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
13	S (T4)	7.09	180	GX23	21137	CF13DS/835/ECO	50	10000	3500	82	800 (720)	1,3,5,9,11
					21134	CF13DS/841/ECO	50	10000	4100	82	800 (720)	1,3,5,9,11
					21135	CF13DS/850/ECO	50	10000	5000	82	800 (720)	1,3,5,9,11

DULUX® D/E 4-Pin SUPERSAVER® ECOLOGIC® Double-Tube Compact Fluorescent Lamps

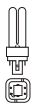
For Dimming and Electronic Ballast

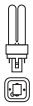
Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
15	D (T4)	5.79	147	G24Q-2	20224	CF18DD/E/15W/SS/830/ECO	50	20000	3000	82	1125 (970)	1,2,4,5,9
					20225	CF18DD/E/15W/SS/835/ECO	50	20000	3500	82	1125 (970)	1,2,4,5,9
					20226	CF18DD/E/15W/SS/841/ECO	50	20000	4100	82	1125 (970)	1,2,4,5,9
21	D (T4)	6.54	166	G24Q-3	20457	CF26DD/E/21W/SS/830/ECO	50	20000	3000	82	1525 (1310)	1,2,4,5,9
					20458	CF26DD/E/21W/SS/835/ECO	50	20000	3500	82	1525 (1310)	1,2,4,5,9
					20459	CF26DD/E/21W/SS/841/ECO	50	20000	4100	82	1525 (1310)	1,2,4,5,9

DULUX® D/E 4-Pin ECOLOGIC® Double-Tube Compact Fluorescent Lamps

For Dimming and Electronic Ballast

Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
13	D (T4)	5.2	132	G24Q-1	20682	CF13DD/E/827/ECO	50	20000	2700	82	900 (775)	1,2,4,5,9
					20721	CF13DD/E/830/ECO	50	20000	3000	82	900 (775)	1,2,4,5,9
					20671	CF13DD/E/835/ECO	50	20000	3500	82	900 (775)	1,2,4,5,9
					20667	CF13DD/E/841/ECO	50	20000	4100	82	900 (775)	1,2,4,5,9
18	D (T4)	5.8	147	G24Q-2	20683	CF18DD/E/827/ECO	50	20000	2700	82	1150 (990)	1,2,4,5,9
					20724	CF18DD/E/830/ECO	50	20000	3000	82	1150 (990)	1,2,4,5,9
					20672	CF18DD/E/835/ECO	50	20000	3500	82	1150 (990)	1,2,4,5,9


DULUX D/E


DULUX D

DULUX® D/E 4-Pin ECOLOGIC® Double-Tube Compact Fluorescent Lamps (Cont.)

For Dimming and Electronic Ballast

Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
18	D (T4)	5.8	147	G24Q-2	20668	CF18DD/E/841/ECO	50	20000	4100	82	1150 (990)	1,2,4,5,9
26	D (T4)	6.5	168	G24Q-3	20684	CF26DD/E/827/ECO	50	20000	2700	82	1710 (1470)	1,2,4,5,9
					20722	CF26DD/E/830/ECO	50	20000	3000	82	1710 (1470)	1,2,4,5,9
					20673	CF26DD/E/835/ECO	50	20000	3500	82	1710 (1470)	1,2,4,5,9
					20669	CF26DD/E/841/ECO	50	20000	4100	82	1710 (1470)	1,2,4,5,9

DULUX® D Preheat 2-Pin ECOLOGIC® Double-Tube Compact Fluorescent Lamps

With Starter in Base for Magnetic Ballasts

Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
9	D (T4)	4.33	110	G23-2	21122	CF9DD/827/ECO	50	10000	2700	82	525 (450)	1,3,5,9,11
					21123	CF9DD/835/ECO	50	10000	3500	82	525 (450)	1,3,5,9,11
13	D (T4)	4.65	118	GX23-2	21117	CF13DD/827/ECO	50	10000	2700	82	780 (670)	1,3,5,9,11
					21119	CF13DD/830/ECO	50	10000	3000	82	780 (670)	1,3,5,9,11
					21118	CF13DD/835/ECO	50	10000	3500	82	780 (670)	1,3,5,9,11
					21120	CF13DD/841/ECO	50	10000	4100	82	780 (670)	1,3,5,9,11
18	D (T4)	6.02	153	G24D-2	21109	CF18DD/827/ECO	50	10000	2700	82	1150 (1075)	1,3,5,9,11
					21112	CF18DD/830/ECO	50	10000	3000	82	1150 (1075)	1,3,5,9,11
					21110	CF18DD/835/ECO	50	10000	3500	82	1150 (1075)	1,3,5,9,11
					21111	CF18DD/841/ECO	50	10000	4100	82	1150 (1075)	1,3,5,9,11
26	D (T4)	6.81	173	G24D-3	21113	CF26DD/827/ECO	50	10000	2700	82	1710 (1550)	1,3,5,9,11
					21116	CF26DD/830/ECO	50	10000	3000	82	1710 (1550)	1,3,5,9,11
					21114	CF26DD/835/ECO	50	10000	3500	82	1710 (1550)	1,3,5,9,11
					21115	CF26DD/841/ECO	50	10000	4100	82	1710 (1550)	1,3,5,9,11

DULUX® T/E/IN Amalgam 4-Pin SUPERSAVER® ECOLOGIC® Triple-Tube Compact Fluorescent Lamps

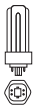
For Dimming and Electronic Ballast

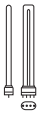
Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 33ºC/95ºF	Notes
21	T (T4)	4.96	126	GX24Q-3	21100	CF26DT/E/IN/21W/830/SS/ECO	50	18000	3000	82	1380 (1185)	1410 (1215)	1,2,4,5,9,10
					21101	CF26DT/E/IN/21W/835/SS/ECO	50	18000	3500	82	1380 (1185)	1410 (1215)	1,2,4,5,9,10
					21102	CF26DT/E/IN/21W/841/SS/ECO	50	18000	4100	82	1380 (1185)	1410 (1215)	1,2,4,5,9,10
28	T (T4)	5.6	142	GX24Q-3	21106	CF32DT/E/IN/28W/830/SS/ECO	50	18000	3000	82	1835 (1580)	1875 (1615)	1,2,4,5,9,10
					21107	CF32DT/E/IN/28W/835/SS/ECO	50	18000	3500	82	1835 (1580)	1875 (1615)	1,2,4,5,9,10
					21108	CF32DT/E/IN/28W/841/SS/ECO	50	18000	4100	82	1835 (1580)	1875 (1615)	1,2,4,5,9,10
38	T (T4)	6.5	163	GX24Q-4	21103	CF42DT/E/IN/38W/830/SS/ECO	50	18000	3000	82	2450 (2105)	2500 (2150)	1,2,4,5,9,10
					21104	CF42DT/E/IN/38W/835/SS/ECO	50	18000	3500	82	2450 (2105)	2500 (2150)	1,2,4,5,9,10
					21105	CF42DT/E/IN/38W/841/SS/ECO	50	18000	4100	82	2450 (2105)	2500 (2150)	1,2,4,5,9,10

DULUX® T/E Amalgam 4-Pin ECOLOGIC® Triple-Tube Compact Fluorescent Lamps

For Dimming and Electronic Ballast

Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 33ºC/95ºF	Notes
18	T (T4)	4.4	111	GX24Q-2	20875	CF18DT/E/IN/827/ECO	50	12000	2700	82	1165 (1000)	1200 (1030)	1,2,4,5,9,10
					20876	CF18DT/E/IN/830/ECO	50	12000	3000	82	1165 (1000)	1200 (1030)	1,2,4,5,9,10
					20877	CF18DT/E/IN/835/ECO	50	12000	3500	82	1165 (1000)	1200 (1030)	1,2,4,5,9,10
					20878	CF18DT/E/IN/841/ECO	50	12000	4100	82	1165 (1000)	1200 (1030)	1,2,4,5,9,10
26	T (T4)	5	126	GX24Q-3	20879	CF26DT/E/IN/827/ECO	50	16000	2700	82	1745 (1500)	1800 (1550)	1,2,4,5,9,10
					20880	CF26DT/E/IN/830/ECO	50	16000	3000	82	1745 (1500)	1800 (1550)	1,2,4,5,9,10
					20881	CF26DT/E/IN/835/ECO	50	16000	3500	82	1745 (1500)	1800 (1550)	1,2,4,5,9,10
					20882	CF26DT/E/IN/841/ECO	50	16000	4100	82	1745 (1500)	1800 (1550)	1,2,4,5,9,10
32	T (T4)	5.6	142	GX24Q-3	20883	CF32DT/E/IN/827/ECO	50	16000	2700	82	2330 (2000)	2400 (2065)	1,2,4,5,9,10
					20884	CF32DT/E/IN/830/ECO	50	16000	3000	82	2330 (2000)	2400 (2065)	1,2,4,5,9,10
					20885	CF32DT/E/IN/835/ECO	50	16000	3500	82	2330 (2000)	2400 (2065)	1,2,4,5,9,10
					20886	CF32DT/E/IN/841/ECO	50	16000	4100	82	2330 (2000)	2400 (2065)	1,2,4,5,9,10


DULUX T/E


DULUX L

DULUX® T/E Amalgam 4-Pin ECOLOGIC® Triple-Tube Compact Fluorescent Lamps (Cont.)

For Dimming and Electronic Ballast

Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 33ºC/95ºF	Notes
42	T (T4)	6.42	163	GX24Q-4	20887	CF42DT/E/IN/827/ECO	50	16000	2700	82	3105 (2670)	3200 (2750)	1,2,4,5,9,10
					20888	CF42DT/E/IN/830/ECO	50	16000	3000	82	3105 (2670)	3200 (2750)	1,2,4,5,9,10
					20871	CF42DT/E/IN/835/ECO	50	16000	3500	82	3105 (2670)	3200 (2750)	1,2,4,5,9,10
					20890	CF42DT/E/IN/841/ECO	50	16000	4100	82	3105 (2670)	3200 (2750)	1,2,4,5,9,10
57	T (T4)	7.76	197	GX24Q-5	20896	CF57DT/E/IN/830/ECO	50	12000	3000	82	4170 (3585)	4300 (3700)	1,2,4,5,9,10
					20897	CF57DT/E/IN/835/ECO	50	12000	3500	82	4170 (3585)	4300 (3700)	1,2,4,5,9,10
					20899	CF57DT/E/IN/841/ECO	50	12000	4100	82	4170 (3585)	4300 (3700)	1,2,4,5,9,10

DULUX® T/E 4-Pin ECOLOGIC® Triple-Tube Compact Fluorescent Lamps

For Dimming and Electronic Ballast

Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
13	T (T4)	4.2	106	GX24Q-1	20891	CF13DT/E/827/ECO	50	12000	2700	82	900 (775)	1,2,4,5,9
					20892	CF13DT/E/830/ECO	50	12000	3000	82	900 (775)	1,2,4,5,9
					20893	CF13DT/E/835/ECO	50	12000	3500	82	900 (775)	1,2,4,5,9
					20894	CF13DT/E/841/ECO	50	12000	4100	82	900 (775)	1,2,4,5,9
26	T (T4)	5.6	142	GX24Q-3	20767	CF26DT/E/827/ECO	50	12000	2700	82	1800 (1550)	1,2,4,5,9

DULUX® L SUPERSAVER ECOLOGIC® Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
28	L (T5)	22.4	570	2G11	20518	FT40DL/28W/830/SS/ECO	10	20000	3000	82	2800 (2410)	1,2,4,5,9,12
					20519	FT40DL/28W/835/SS/ECO	10	20000	3500	82	2800 (2410)	1,2,4,5,9,12
					20488	FT40DL/28W/841/SS/ECO	10	20000	4100	82	2800 (2410)	1,2,4,5,9,12
25	L (T5)	22.4	570	2G11	20117	FT40DL/25W/835/SS/ECO	10	20000	3500	82	2500 (2300)	1,2,4,5,9,12
					20118	FT40DL/25W/841/SS/ECO	10	20000	4100	82	2500 (2300)	1,2,4,5,9,12

DULUX® L ECOLOGIC® Compact Fluorescent Lamps

Nominal Wattage	Bulb Shape	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
18	L (T5)	9	225	2G11	20587	FT18DL/835/ECO	10	12000	3000	82	1250 (1075)	1,2,4,5,9
					20588	FT18DL/835/ECO	10	12000	3500	82	1250 (1075)	1,2,4,5,9
					20589	FT18DL/841/ECO	10	12000	4100	82	1250 (1075)	1,2,4,5,9
18	L (T5)	10.5	268	2G11	20595	FT18DL/830/RS/ECO	10	20000	3000	82	1120 (963)	1,2,4,5,9
					20594	FT18DL/835/RS/ECO	10	20000	3500	82	1250 (1075)	1,2,4,5,9
					20593	FT18DL/841/RS/ECO	10	20000	4100	82	1250 (1075)	1,2,4,5,9
24	L (T5)	12.9	320	2G11	20597	FT24DL/830/ECO	10	12000	3000	82	1800 (1548)	1,2,4,5,9
					20580	FT24DL/835/ECO	10	12000	3500	82	1800 (1548)	1,2,4,5,9
					20596	FT24DL/841/ECO	10	12000	4100	82	1800 (1548)	1,2,4,5,9
36	L (T5)	16.6	415	2G11	20581	FT36DL/830/ECO	10	12000	3000	82	2900 (2495)	1,2,4,5,9
					20582	FT36DL/835/ECO	10	12000	3500	82	2901 (2495)	1,2,4,5,9
					20583	FT36DL/841/ECO	10	12000	4100	82	2902 (2495)	1,2,4,5,9
40	L (T5)	22.4	570	2G11	20584	FT40DL/830/RS/ECO	10	15000	3000	82	3150 (2710)	1,2,4,5,9
					20585	FT40DL/835/RS/ECO	10	15000	3500	82	3150 (2710)	1,2,4,5,9
					20586	FT40DL/841/RS/ECO	10	15000	4100	82	3150 (2710)	1,2,4,5,9
					20576	FT40DL/850/RS/ECO	10	20000	5000	82	3150 (2710)	1,2,4,5,9
50	L (T5)	22.6	570	2G11	20278	FT50DL/835/RS/ECO	10	14000	3500	82	4300 (3655)	1,2,4,5,9
					20276	FT50DL/841/RS/ECO	10	14000	4100	82	4300 (3655)	1,2,4,5,9
55	L (T5)	21.1	535	2G11	20590	FT55DL/830/ECO	10	12000	3000	82	4800 (4143)	1,2,4,5,9
					20591	FT55DL/835/ECO	10	12000	3500	82	4800 (4143)	1,2,4,5,9
					20592	FT55DL/841/ECO	10	12000	4100	82	4800 (4143)	1,2,4,5,9
					20725	FT55DL/954/ECO	10	20000	5400	82	4000 (4128)	1,2,4,5,9

SYLVANIA DULUX® COMPACT FLUORESCENT LAMP CROSS REFERENCE

DULUX S Lamps

NAED	SYLVANIA	NEMA / GENERIC	GE	PHILIPS	WATTAGE	BASE
21279	CF5DS/827	CFT5W/G23/827	F5BX/SPX27	PL-S 5W/827	5	G23
21278	CF5DS/841	CFT5W/G23/827	F5BX/SPX41	–	5	G23
21277	CF7DS/827	CFT7W/G23/827	F7BX/SPX27	PL-S 7W/827	7	G23
21276	CF7DS/835	CFT7W/G23/835	F7BX/SPX35	PL-S 7W/835	7	G23
21274	CF7DS/841	CFT7W/G23/841	F7BX/SPX41	PL-S 7W/841	7	G23
21275	CF7DS/850	CFT7W/G23/850	–	PL-S 7W/850	7	G23
21272	CF9DS/827	CFT9W/G23/827	F9BX/SPX27	PL-S 9W/827	9	G23
21273	CF9DS/835	CFT9W/G23/835	F9BX/SPX35	PL-S 9W/835	9	G23
21134	CF9DS/841	CFT9W/G23/841	F9BX/SPX41	PL-S 9W/841	9	G23
21271	CF9DS/850	CFT9W/G23/850	–	PL-S 9W/850	9	G23
21136	CF13DS/827	CFT13W/GX23/827	F13BX/SPX27	PL-S 13W/827	13	GX23
21133	CF13DS/830	CFT13W/GX23/830	F13BX/SPX30	PL-S 13W/830	13	GX23
21137	CF13DS/835	CFT13W/GX23/835	F13BX/SPX35	PL-S 13W/835	13	GX23
20306	CF13DS/841	CFT13W/GX23/841	F13BX/SPX41	PL-S 13W/841	13	GX23
21135	CF13DS/850	CFT13W/GX23/850	F13BX/SPX50	PL-S 13W/850	13	GX23

DULUX S/E Lamps

NAED	SYLVANIA	NEMA / GENERIC	GE	PHILIPS	WATTAGE	BASE
20315	CF5DS/E/841	CFT5W/2G7/841	–	–	5	2G7
20312	CF7DS/E/827	CFT7W/2G7/827	–	–	7	2G7
20316	CF7DS/E/841	CFT7W/2G7/841	–	–	7	2G7
20313	CF9DS/E/827	CFT9W/2G7/827	–	–	9	2G7
20317	CF9DS/E/841	CFT9W/2G7/841	–	–	9	2G7
20314	CF13DS/E/827	CFT13W/2GX7/827	–	–	13	2GX7
20284	CF13DS/E/830	CFT13W/2GX7/830	–	–	13	2GX7
20318	CF13DS/E/841	CFT13W/2GX7/841	–	–	13	2GX7

DULUX D ECOLOGIC® Lamps

NAED	SYLVANIA	NEMA / GENERIC	GE	PHILIPS	WATTAGE	BASE
21122	CF9DD/827/ECO	CFQ9W/G23/827	F9DBX23T4/SPX27	–	9	G23-2
21123	CF9DD/835/ECO	CFQ9W/G23/835	–	–	9	G23-2
21117	CF13DD/827/ECO	CFQ13W/GX23/827	F13DBX23T4/SPX27	PL-C 13W/827/USA	13	GX23-2
21119	CF13DD/830/ECO	CFQ13W/GX23/830	F13DBX23T4/SPX30	PL-C 13W/830/USA	13	GX23-2
21118	CF13DD/835/ECO	CFQ13W/GX23/835	F13DBX23T4/SPX35	PL-C 13W/835/USA	13	GX23-2
21120	CF13DD/841/ECO	CFQ13W/GX23/841	F13DBX23T4/SPX41	PL-C 13W/841/USA	13	GX23-2
21109	CF18DD/827/ECO	CFQ18W/G24d/827	F18DBXT4/SPX27	PL-C 18W/827	18	G24 d-2
21112	CF18DD/830/ECO	CFQ18W/G24d/830	F18DBXT4/SPX30	PL-C 18W/830	18	G24 d-2
21110	CF18DD/835/ECO	CFQ18W/G24d/835	F18DBXT4/SPX35	PL-C 18W/835	18	G24 d-2
21111	CF18DD/841/ECO	CFQ18W/G24d/841	F18DBXT4/SPX41	PL-C 18W/841	18	G24 d-2
21113	CF26DD/827/ECO	CFQ26W/G24d/827	F26DBXT4/SPX27	PL-C 26W/827	26	G24 d-3
21116	CF26DD/830/ECO	CFQ26W/G24d/830	F26DBXT4/SPX30	PL-C 26W/830	26	G24 d-3
21114	CF26DD/835/ECO	CFQ26W/G24d/835	F26DBXT4/SPX35	PL-C 26W/835	26	G24 d-3
21115	CF26DD/841/ECO	CFQ26W/G24d/841	F26DBXT4/SPX41	PL-C 26W/841	26	G24 d-3

DULUX D/E ECOLOGIC Lamps

NAED	SYLVANIA	NEMA / GENERIC	GE	PHILIPS	WATTAGE	BASE
20682	CF13DD/E/827/ECO	CFQ13W/G24q/827	F13DBX/SPX27/4P	PL-C 13W/827/4P	13	G24 q-1
20721	CF13DD/E/830/ECO	CFQ13W/G24q/830	F13DBX/SPX30/4P	PL-C 13W/830/4P	13	G24 q-1
20671	CF13DD/E/835/ECO	CFQ13W/G24q/835	F13DBX/SPX35/4P	PL-C 13W/835/4P	13	G24 q-1
20667	CF13DD/E/841/ECO	CFQ13W/G24q/841	F13DBX/SPX41/4P	PL-C 13W/841/4P	13	G24 q-1
20683	CF18DD/E/827/ECO	CFQ18W/G24q/827	F18DBX/SPX27/4P	PL-C 18W/827/4P	18	G24 q-2
20724	CF18DD/E/830/ECO	CFQ18W/G24q/830	F18DBX/SPX30/4P	PL-C 18W/830/4P	18	G24 q-2
20672	CF18DD/E/835/ECO	CFQ18W/G24q/835	F18DBX/SPX35/4P	PL-C 18W/835/4P	18	G24 q-2
20668	CF18DD/E/841/ECO	CFQ18W/G24q/841	F18DBX/SPX41/4P	PL-C 18W/841/4P	18	G24 q-2
20684	CF26DD/E/827/ECO	CFQ26W/G24q/827	F26DBX/SPX27/4P	PL-C 26W/827/4P	26	G24 q-3
20722	CF26DD/E/830/ECO	CFQ26W/G24q/830	F26DBX/SPX30/4P	PL-C 26W/830/4P	26	G24 q-3
20673	CF26DD/E/835/ECO	CFQ26W/G24q/835	F26DBX/SPX35/4P	PL-C 26W/835/4P	26	G24 q-3
20669	CF26DD/E/841/ECO	CFQ26W/G24q/841	F26DBX/SPX41/4P	PL-C 26W/841/4P	26	G24 q-3

DULUX D/E ECOLOGIC Lamps

NAED	SYLVANIA	NEMA / GENERIC	GE	PHILIPS	WATTAGE	BASE
20224	CF18DD/E/15W/SS/830/ECO	CFQ18W/G24Q/830	N/A	N/A	15	G24Q-2
20225	CF18DD/E/15W/SS/835/ECO	CFQ18W/G24Q/835	N/A	PL-C 18W/835/XEW/4P/ALTO 14W	15	G24Q-2
20226	CF18DD/E/15W/SS/841/ECO	CFQ18W/G24Q/841	N/A	PL-C 18W/841/XEW/4P/ALTO 14W	15	G24Q-2
20457	CF26DD/E/21W/SS/830/ECO	CFQ26W/G24Q/830	N/A	N/A	21	G24Q-3
20458	CF26DD/E/21W/SS/835/ECO	CFQ26W/G24Q/835	N/A	PL-C 26W/835/XEW/4P/ALTO 21W	21	G24Q-3
20459	CF26DD/E/21W/SS/841/ECO	CFQ26W/G24Q/841	N/A	PL-C 26W/841/XEW/4P/ALTO 21W	21	G24Q-3

DULUX T/E ECOLOGIC Lamps

NAED	SYLVANIA	NEMA / GENERIC	GE	PHILIPS	WATTAGE	BASE
20891	CF13DT/E/827/ECO	CFTR13W/GX24q/827	F13TBX/827/4P/EOL	–	13	GX24 q-1
20892	CF13DT/E/830/ECO	CFTR13W/GX24q/830	–	–	13	GX24 q-1
20893	CF13DT/E/835/ECO	CFTR13W/GX24q/835	–	–	13	GX24 q-1
20894	CF13DT/E/841/ECO	CFTR13W/GX24q/841	–	–	13	GX24 q-1
20767	CF26DT/E/827/ECO	CFTR26W/GX24q/827	F26TBX/827/4P/EOL	–	26	GX24 q-3

SYLVANIA DULUX® COMPACT FLUORESCENT LAMP CROSS REFERENCE (CONT.)

DULUX T/E/IN ECOLOGIC® Lamps

NAED	SYLVANIA	NEMA / GENERIC	GE	PHILIPS	WATTAGE	BASE
20875	CF18DT/E/IN/827/ECO	CFTR18W/GX24q/827	F18TBX/SPX27/A/4P	PL-T 18W/827/4P	18	GX24 q-2
20876	CF18DT/E/IN/830/ECO	CFTR18W/GX24q/830	F18TBX/SPX30/A/4P	PL-T 18W/830/4P	18	GX24 q-2
20877	CF18DT/E/IN/835/ECO	CFTR18W/GX24q/835	F18TBX/SPX35/A/4P	PL-T 18W/835/4P	18	GX24 q-2
20878	CF18DT/E/IN/841/ECO	CFTR18W/GX24q/841	F18TBX/SPX41/A/4P	PL-T 18W/841/4P	18	GX24 q-2
20879	CF26DT/E/IN/827/ECO	CFTR26W/GX24q/827	F26TBX/SPX27/A/4P	PL-T 26W/827/4P	26	GX24 q-3
20880	CF26DT/E/IN/830/ECO	CFTR26W/GX24q/830	F26TBX/SPX30/A/4P	PL-T 26W/830/4P	26	GX24 q-3
20881	CF26DT/E/IN/835/ECO	CFTR26W/GX24q/835	F26TBX/SPX35/A/4P	PL-T 26W/835/4P	26	GX24 q-3
20882	CF26DT/E/IN/841/ECO	CFTR26W/GX24q/841	F26TBX/SPX41/A/4P	PL-T 26W/841/4P	26	GX24 q-3
20883	CF32DT/E/IN/827/ECO	CFTR32W/GX24q/827	F32TBX/SPX27/A/4P	PL-T 32W/827/4P	32	GX24 q-3
20884	CF32DT/E/IN/830/ECO	CFTR32W/GX24q/830	F32TBX/SPX30/A/4P	PL-T 32W/830/4P	32	GX24 q-3
20885	CF32DT/E/IN/835/ECO	CFTR32W/GX24q/835	F32TBX/SPX35/A/4P	PL-T 32W/835/4P	32	GX24 q-3
20886	CF32DT/E/IN/841/ECO	CFTR32W/GX24q/841	F32TBX/SPX41/A/4P	PL-T 32W/841/4P	32	GX24 q-3
20887	CF42DT/E/IN/827/ECO	CFTR42W/GX24q/827	F42TBX/827/A/4P/EOL	PL-T 42W/827/4P	42	GX24 q-4
20888	CF42DT/E/IN/830/ECO	CFTR42W/GX24q/830	F42TBX/830/A/4P/EOL	PL-T 42W/830/4P	42	GX24 q-4
20871	CF42DT/E/IN/835/ECO	CFTR42W/GX24q/835	F42TBX/835/A/4P/EOL	PL-T 42W/835/4P	42	GX24 q-4
20890	CF42DT/E/IN/841/ECO	CFTR42W/GX24q/841	F42TBX/841/A/4P/EOL	PL-T 42W/841/4P	42	GX24 q-4
20896	CF57DT/E/IN/830/ECO	CFTR57W/GX24q/830	F57QBX/830/A/4P/EOL	PL-T 57W/830/4P/A	57	GX24 q-5
20897	CF57DT/E/IN/835/ECO	CFTR57W/GX24q/835	F57QBX/835/A/4P/EOL	PL-T 57W/835/4P/A	57	GX24 q-5
20899	CF57DT/E/IN/841/ECO	CFTR57W/GX24q/841	F57QBX/841/A/4P/EOL	PL-T 57W/841/4P/A	57	GX24 q-5

DULUX T/E/IN SUPERSAVER ECOLOGIC Lamps

NAED	SYLVANIA	NEMA / GENERIC	GE	PHILIPS	WATTAGE	BASE
21100	CF26DT/E/IN/21W/830/SS/ECO	CFTR26W/GX24q/30	N/A	N/A	21	GX24Q-3
21101	CF26DT/E/IN/21W/835/SS/ECO	CFTR26W/GX24q/35	N/A	N/A	21	GX24Q-3
21102	CF26DT/E/IN/21W/841/SS/ECO	CFTR26W/GX24q/41	N/A	N/A	21	GX24Q-3
21106	CF32DT/E/IN/28W/830/SS/ECO	CFTR32W/GX24q/30	N/A	PL-T 32W/830/XEW/4P/ALTO 27W	28	GX24Q-3
21107	CF32DT/E/IN/28W/835/SS/ECO	CFTR32W/GX24q/35	N/A	PL-T 32W/835/XEW/4P/ALTO 27W	28	GX24Q-3
21108	CF32DT/E/IN/28W/841/SS/ECO	CFTR32W/GX24q/41	N/A	PL-T 32W/841/XEW/4P/ALTO 27W	28	GX24Q-3
21103	CF42DT/E/IN/38W/830/SS/ECO	CFTR42W/GX24q/30	N/A	PL-T 42W/830/XEW/4P/ALTO 33W	38	GX24Q-4
21104	CF42DT/E/IN/38W/835/SS/ECO	CFTR42W/GX24q/35	N/A	PL-T 42W/835/XEW/4P/ALTO 33W	38	GX24Q-4
21105	CF42DT/E/IN/38W/841/SS/ECO	CFTR42W/GX24q/41	N/A	PL-T 42W/841/XEW/4P/ALTO 33W	38	GX24Q-4

DULUX® L ECOLOGIC Lamps

NAED	SYLVANIA	NEMA / GENERIC	GE	PHILIPS	WATTAGE	BASE
20587	FT18DL830/ECO	FT18W/2G11/830	F18BX/SPX30	PL-L 18W/830	18	2G11
20595	FT18DL830RS/ECO	FT18W/2G11/RS/830	F18BX/SPX30/RS	PL-L 18W/830	18	2G11
20588	FT18DL835/ECO	FT18W/2G11/835	F18BX/SPX35	PL-L 18W/835	18	2G11
20594	FT18DL835RS/ECO	FT18W/2G11/RS/835	F18BX/SPX35/RS	PL-L 18W/835	18	2G11
20589	FT18DL841/ECO	FT18W/2G11/841	F18BX/SPX41	PL-L 18W/841	18	2G11
20593	FT18DL841RS/ECO	FT18W/2G11/RS/841	F18BX/SPX41/RS	PL-L 18W/841	18	2G11
20597	FT24DL830/ECO	FT24W/2G11/830	F27BX/SPX30/RS	PL-L 24W/830	24	2G11
20580	FT24DL835/ECO	FT24W/2G11/835	F27BX/SPX35/RS	PL-L 24W/835	24	2G11
20596	FT24DL841/ECO	FT24W/2G11/841	F27BX/SPX41/RS	PL-L 24W/841	24	2G11
20581	FT36DL830/ECO	FT36W/2G11/830	F39BX/SPX30/RS	PL-L 36W/830	36	2G11
20582	FT36DL835/ECO	FT36W/2G11/835	F39BX/SPX35/RS	PL-L 36W/835	36	2G11
20583	FT36DL841/ECO	FT36W/2G11/841	F39BX/SPX41/RS	PL-L 36W/841	36	2G11
20518	FT40DL/28W/830/SS/IS/ECO	FT40W/2G11/RS/830	–	–	28	2G11
20519	FT40DL/28W/835/SS/IS/ECO	FT40W/2G11/RS/835	–	–	28	2G11
20488	FT40DL/28W/841/SS/IS/ECO	FT40W/2G11/RS/841	–	–	28	2G11
20584	FT40DL830RS/ECO	FT40W/2G11/RS/830	F40/30BX/SPX30	PL-L 40W/830/RS/IS	40	2G11
20585	FT40DL835RS/ECO	FT40W/2G11/RS/835	F40/30BX/SPX35	PL-L 40W/835/RS/IS	40	2G11
20586	FT40DL841RS/ECO	FT40W/2G11/RS/841	F40/30BX/SPX41	PL-L 40W/841/RS/IS	40	2G11
20576	FT40DL850RS/ECO	FT40W/2G11/RS/850	F40/30BX/SPX50RS	–	40	2G11
20590	FT55DL830/ECO	FT55W/2G11/RS/830	F55BX/830	–	55	2G11
20591	FT55DL835/ECO	FT55W/2G11/RS/835	F55BX/835	–	55	2G11
20592	FT55DL841/ECO	FT55W/2G11/RS/841	F55BX/841	–	55	2G11

DULUX L SUPERSAVER® ECOLOGIC Lamps

NAED	SYLVANIA	NEMA / GENERIC	GE	PHILIPS	WATTAGE	BASE
20518	FT40DL/28W/830/SS/ECO	FT28W/2G11/830	N/A	N/A	28	2G11
20519	FT40DL/28W/835/SS/ECO	FT28W/2G11/835	N/A	N/A	28	2G11
20488	FT40DL/28W/841/SS/ECO	FT28W/2G11/841	N/A	N/A	28	2G11
20117	FT40DL/25W/835/SS/ECO	FT28W/2G11/835	F40/25BX835/IS/WM	PL-L 40W/835/XEW/4P/IS 25W	25	2G11
20118	FT40DL/25W/841/SS/ECO	FT28W/2G11/841	F40/25BX840/IS/WM	PL-L 40W/841/XEW/4P/IS 25W	25	2G11

NOTES FOR COMPACT FLUORESCENT LAMPS

Symbol	Description
✹	New item introduced within the past year.
	This ECOLOGIC® lamp was designed to pass the Federal TCLP criteria for classification as non-hazardous waste in most states. Disposal regulations may vary; check local and state regulations.
	Lead-Free Glass.

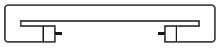
Footnote	Description
1	Approximate initial lumens after 100 hours operation.
2	Minimum starting temperature is a function of the ballast; consult the ballast manufacturer.
3	2-pin CF lamps are not suitable for use in frequently cycled applications or with occupancy sensors. 2-pin CF lamps should never be installed in 4-pin sockets regardless if lamp will fit.
4	There is a NEMA supported, industry issue where T2, T4 and T5 fluorescent and compact fluorescent lamps operated on high frequency ballasts may experience an abnormal end-of-life phenomenon. This end-of-life phenomenon can result in one or both of the following: (1) Bulb wall cracking near the lamp base. (2) The lamp can overheat in the base area and possibly melt the base and socket. NEMA recommends that high frequency compact fluorescent ballasts have an end-of-life shutdown circuit which will safely and reliably shut down the system in the rare event of an abnormal end-of-life failure mode described above. For additional information refer to NEMA papers on their WEBSITE at www.NEMA.org.
5	The life ratings of fluorescent lamps are based on 3 hour burning cycles under specified conditions and with ballast meeting ANSI specifications. If burning cycle is increased, there will be a corresponding increase in the average hours life.
6	These lamps may also be operated on rapid start circuits. On rapid start circuits the 24 watt lamp operates at 27 watts and the 36 watt lamp operated at 39 watts. Rated lamp life is unchanged.
7	Energy savings not realized on 120V operation.
8	DULUX F lamps can typically be operated on DULUX L and PENTRON HO ballasts of the same/similar wattage. Check with the ballast manufacturer to verify lamp/ballast compatibility.
9	Rule of thumb for Compact Fluorescent Lamps: Divide wattage of incandescent lamp by 4 to determine approximate wattage of compact fluorescent lamp that will provide similar light output.
10	Optimum light output for DULUX T/E IN amalgam compact fluorescent lamps occurs at approximately 35ºC/95ºF ambient temperature when the lamp is operated in the base up position. The lumen value listed refers to the optimum light output. Non-amalgam compact fluorescent lamps provide at least 90% light output from 60-100ºF in the base up position, the temperature range is narrower for horizontal or base down position.
11	Minimum starting temperature: CF5: -22ºF; CF7: -4ºF; CF9: 14ºF; CF13DS: 14ºF; CF13DD: -4ºF; CF18DD: 5ºF; CF18DT: -4ºF; CF26: 14ºF.
12	Operates on Instant Start or Programmed Start ballasts.

Fluorescent

Table of Contents

FLUORESCENT LAMPS

The bulb shape and size of a fluorescent lamp are expressed by means of a code consisting of the letter "T" (which designates that the bulb is "tubular" in shape) followed by a number that expresses the diameter in eighths of an inch. Diameters range from T5 at 5/8" diameter to T17 (2⅛ inch). In nominal overall length, linear fluorescent lamps range from 6 to 96 inches. The nominal length is measured from back of lamp holder to back of lamp holder. For example, the actual overall length of the 40-watt rapid start T12 lamp with a nominal length of 48 inches is 47¾ inches. The nominal length given for PENTRON® linear lamps is the closest familiar nominal length. CURVALUME® U-shaped fluorescent lamps are available as OCTRON® T8 lamps with leg spacings of 1⅝ inches and 6 inches and as rapid start T12 lamps with 6 spacings of 6 inches. The leg spacing is measured from the center of one leg to the center of the other leg. The overall length of the CURVALUME lamps is measured from the face of the bases to the outside of the glass bend. Circline lamps, which are circular in shape, are available in PENTRON T5 lamps with outside diameters of 8.85 and 11.77 inches.

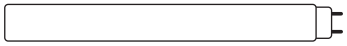


PENTRON T5 and T5HO SEAMLESS
(5/8" diameter)

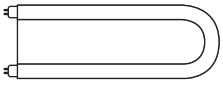
PREHEAT, RAPID START

Preheat T5 Miniature Bipin (5/8" diameter)
PENTRON T5 Miniature Bipin (5/8" diameter)

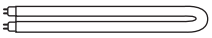
OCTRON T8 Medium Bipin (1" diameter)
Rapid Start or Instant Start operation



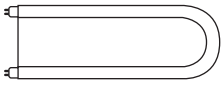
T12 Medium Bipin (1-1/2" diameter)



U-Shaped T12
(1-1/2" diameter)
6" leg spacing

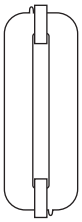


OCTRON T8 U-Shaped
with 1 5/8" leg spacing
(1" diameter)



OCTRON T8 U-Shaped
with 6" leg spacing
(1" diameter)

ICETRON®



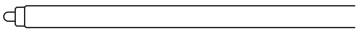
ICETRON®

HIGH OUTPUT AND VERY HIGH OUTPUT

OCTRON T8 Recessed Double Contact (1" diameter)

T12 Recessed Double Contact (1-1/2" diameter)

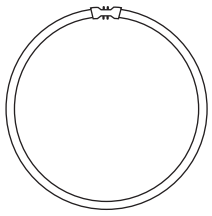
INSTANT START



T6 Single Pin (3/4" diameter)

T8 Single Pin (1" diameter)
OCTRON T8 Single Pin (1" diameter)

T12 Single Pin (1-1/2" diameter)



PENTRON CIRCLINE 4-Pin T5
(8.85" & 11.77"
outside diameters)

BASES

For linear Preheat and Rapid Start Lamps, four electrical contacts are required, two at each end of the lamp. This is accomplished in the standard line of lamps by the use of a miniature bipin base for T5 lamps and a medium bipin for T8 and T12 lamps. The OCTRON® T8 medium bipin lamps may also be operated as instant start lamps with the proper wiring and ballasts. When operating OCTRON bipin lamps with instant start ballasts, the two contacts in the lamp holder are shorted together and connected to the single circuit in the ballast. In Circline lamps, the cathodes are connected to a 4-pin base located between the junction of the two ends of the lamp. High Output (HO) and Very High Output (VHO) lamps have recessed double contact (RDC) type bases. Slimline Instant Start lamps require only two electrical contacts, one on each lamp end and have single pin bases.

SINGLE PIN

Single Pin for
T6 Slimline

Single Pin for T8 Slimline
& OCTRON®

Single Pin for
T12 Slimline

BIPIN

Miniature Bipin for T5
Preheat & PENTRON®

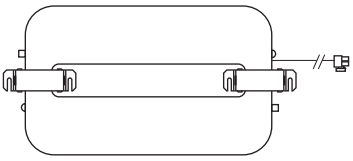
Medium Bipin for T8
Preheat & OCTRON

Medium Bipin for T12

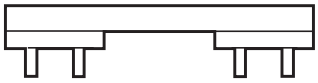
Recessed Double Contact
for OCTRON T8 HO

Recessed Double Contact
for T12 HO & VHO

4-pin for
PENTRON Circline



ICETRON® Mounting Brackets



OCTRON T8 & T12 Rapid Start CURVALUME

HOW TO READ PRODUCT INFORMATION – FLUORESCENT

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
28	T8	48	47.78	Med Bipin	22483	FO28/835/XPPLUS/SS/ECO3	30	24000	46000	46000	52000	3500	85	2675 (2515)	,★,,3, 12,13,17,19
					22484	FO28/841/XPPLUS/SS/ECO3	30	24000	46000	46000	52000	4100	85	2675 (2515)	,★,,3, 12,13,17,19
					22485	FO28/850/XPPLUS/SS/ECO3	30	24000	46000	46000	52000	5000	81	2675 (2515)	,★,,3, 12,13,17,19

Nominal Wattage — Named wattage on reference ballast. Actual wattage depends on ballast.

Bulb — Describes the shape of the bulb followed by the bulb's diameter at its widest point. The diameter value is expressed in eighths of an inch. Ex. T = Tubular, 8 = $^{8}/_{8}$ inch = 1 inch. Please see page 80 for bulb illustrations.

Base — Please see page 80 for base illustrations.

Nominal Length — The nominal length of linear fluorescent lamps is typically measured from back of lampholder to back of lampholder. PENTRON® linear lamp, CURVALUME® and Circline lamps are exceptions. The nominal length given for PENTRON linear lamps is the closest familiar nominal length. CURVALUME lamps are measured from the face of the bases to the outside of the glass bend. The measurement for Circline lamps is the outside diameter. Values are in inches.

MOL — Maximum overall length. The length of the lamp measured in inches.

Symbols & Footnotes — Most symbols and footnotes that apply to a specific product will appear in this space. The explanations of the symbols and footnotes are at the end of the fluorescent section.

Ordering Abbreviation — A text description of the lamp. Please see below for several examples and explanations of some of the codes.

CCT — Correlated Color Temperature. The degree of "whiteness" of the light. Expressed in Kelvins (K). Please see page 114 for more information.

CRI — Color Rendering Index. A numbering system for rating the relative color rendering quality of a light source compared to a standard. Please see page 114 for more information.

Initial & Mean Lumens — Initial lumens are measured when the lamp has been operating for 100 hours. Mean lumens are typically measured at 40% of the rated life of the lamp. Fluorescent lamp lumens are typically measured at 25°C (77°F). The lamp lumens are measured at both 25°C (77°F) and 35°C (95°F) for PENTRON® linear lamps.

HOW TO READ ORDERING ABBREVIATIONS

FO32/835XP/ECO		F34CWX/SS		FP54/830/HO/ECO		F96T12/CWX/SS/UPC	
F	Fluorescent	F	Fluorescent	F	Fluorescent	F	Fluorescent
O	OCTRON®	34	Nominal lamp wattage	P	PENTRON®	96	96" nominal length
32	Nominal lamp wattage	CWX	Cool White Deluxe Phosphor	54	Nominal lamp wattage	T	Tubular Shape Bulb
8	85 CRI	SS	SUPERSAVER® – reduced wattage lamp	8	85 CRI	12	Bulb diameter; $^{12}/_{8}$ inch = 1½ inches
35	3500K CCT			30	3000K CCT	CWX	Cool White Deluxe phosphor
XP®	EXtended Performance			HO	High Output	SS	SUPERSAVER – reduced wattage lamp
ECO®	ECOLOGIC® – TCLP passing lamp			ECO®	ECOLOGIC® – TCLP passing lamp	UPC	UPC Label

LAMP DISPOSAL LABELING

The following information appears on the packages of fluorescent lamps.

Hg **LAMP CONTAINS MERCURY**

Manage in accordance with disposal laws
See www.lamprecycle.org or 1-866-666-6850

For weight and measurement information, please visit www.sylvania.com

T8 Medium Bipin (1" diameter)

OCTRON® ECOLOGIC® T8 FLUORESCENT LAMPS

OCTRON XP XL SS Extended Performance, Extended Life, SUPERSAVER® ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
28	T8	48	47.78	Med Bipin	21528	FO28/830/XP/XL/ECO3	30	50000	75000	80000	84000	3000	85	2600 (2470)	3,6, 12,13,17,19
					22166	FO28/835XP/XL/SS/ECO3	30	50000	75000	80000	84000	3500	85	2600 (2470)	3,6, 12,13,17,19
					22167	FO28/841XP/XL/SS/ECO3	30	50000	75000	80000	84000	4100	85	2600 (2470)	3,6, 12,13,17,19
					22326	FO28/850XP/XL/SS/ECO3	30	50000	75000	80000	84000	5000	81	2600 (2470)	3,6, 12,13,17,19
25	T8	48	47.78	Med Bipin	22349	FO32/25W/830/XP/XL/SS/ECO3	30	50000	75000	80000	84000	3000	85	2400 (2280)	3,6, 12,13,17,19
					22222	FO32/25W/835/XP/XL/SS/ECO3	30	50000	75000	80000	84000	3500	85	2400 (2280)	3,6, 12,13,17,19
					22223	FO32/25W/841/XP/XL/SS/ECO3	30	50000	75000	80000	84000	4100	85	2400 (2280)	3,6, 12,13,17,19

OCTRON XP XL Extended Performance, Extended Life ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
32	T8	48	47.78	Med Bipin	21527	FO32/830/XP/XL/ECO3	30	36000	52000	65000	67000	3000	85	2949 (2830)	3,6, 12,13,17,19
					21576	FO32/835/XP/XL/ECO3	30	36000	52000	65000	67000	3500	85	2950 (2830)	3,6, 12,13,17,19
					21577	FO32/841/XP/XL/ECO3	30	36000	52000	65000	67000	4100	85	2950 (2830)	3,6, 12,13,17,19
					22002	FO32/850/XP/XL/ECO3	30	36000	52000	65000	67000	5000	81	2950 (2830)	3,6, 12,13,17,19

OCTRON XP PLUS SUPERSAVER ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
28	T8	48	47.78	Med Bipin	22483	FO28/835/XPPLUS/SS/ECO3	30	24000	46000	46000	52000	3500	85	2675 (2515)	★,3, 12,13,17,19
					22484	FO28/841/XPPLUS/SS/ECO3	30	24000	46000	46000	52000	4100	85	2675 (2515)	★,3, 12,13,17,19
					22485	FO28/850/XPPLUS/SS/ECO3	30	24000	46000	46000	52000	5000	81	2675 (2515)	★,3, 12,13,17,19

T8 Medium Bipin (1" diameter)

OCTRON 800 XPS ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
17	T8	24	23.78	Med Bipin	22150	FO17/830/XPS/ECO3	30	24000	40000	40000	42000	3000	85	1400 (1315)	3, 12,13,17,19
					22151	FO17/835/XPS/ECO3	30	24000	40000	40000	42000	3500	85	1400 (1315)	3, 12,13,17,19
					22152	FO17/841/XPS/ECO3	30	24000	40000	40000	42000	4100	85	1400 (1315)	3, 12,13,17,19
25	T8	36	35.78	Med Bipin	22153	FO25/830/XPS/ECO3	30	24000	40000	40000	42000	3000	85	2200 (2070)	3, 12,13,17,19
					22154	FO25/835/XPS/ECO3	30	24000	40000	40000	42000	3500	85	2200 (2070)	3, 12,13,17,19
					22155	FO25/841/XPS/ECO3	30	24000	40000	40000	42000	4100	85	2200 (2070)	3, 12,13,17,19
32	T8	48	47.78	Med Bipin	21680	FO32/830/XPS/ECO3	30	24000	40000	40000	42000	3000	85	3100 (2915)	E, 3, 12,13,17,19
					21697	FO32/835/XPS/ECO3	30	24000	40000	40000	42000	3500	85	3100 (2915)	E, 3, 12,13,17,19
					21681	FO32/841/XPS/ECO3	30	24000	40000	40000	42000	4100	85	3100 (2915)	E, 3, 12,13,17,19
					21660	FO32/850/XPS/ECO3	30	24000	40000	40000	42000	5000	81	3100 (2915)	E, 3, 12,13,17,19
					21659	FO32/865/XPS/ECO3	30	24000	40000	40000	42000	6500	81	3000 (2820)	E, 3, 12,13,17,19

OCTRON 800XP 4-Foot SUPERSAVER ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
25	T8	48	47.78	Med Bipin	22232	FO32/25W/830/XP/SS/ECO3	30	24000	40000	40000	42000	3000	85	2500 (2350)	3, 6,12,13,17,19
					22233	FO32/25W/835/XP/SS/ECO3	30	24000	40000	40000	42000	3500	85	2500 (2350)	3, 6,12,13,17,19
					22234	FO32/25W/841/XP/SS/ECO3	30	24000	40000	40000	42000	4100	85	2500 (2350)	3, 6,12,13,17,19
					22235	FO32/25W/850/XP/SS/ECO3	30	24000	40000	40000	42000	5000	81	2500 (2350)	3, 6,12,13,17,19
28	T8	48	47.78	Med Bipin	22177	FO28/830/XP/SS/ECO3	30	24000	40000	40000	42000	3000	85	2725 (2560)	E, 3, 6,12,13,17,19
					22178	FO28/835/XP/SS/ECO3	30	24000	40000	40000	42000	3500	85	2725 (2560)	E, 3, 6,12,13,17,19
					22179	FO28/841/XP/SS/ECO3	30	24000	40000	40000	42000	4100	85	2725 (2560)	E, 3, 6,12,13,17,19
					22184	FO28/850/XP/SS/ECO3	30	24000	40000	40000	42000	5000	81	2725 (2560)	E, 3, 6,12,13,17,19

T8 Medium Bipin (1" diameter)

OCTRON® ECOLOGIC® T8 FLUORESCENT LAMPS (CONT.)

OCTRON 800XP SUPERSAVER® ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
15	T8	24	23.78	Med Bipin	22405	FO17/15W/830/XP/SS/ECO3	30	24000	40000	40000	42000	3000	85	1200 (1130)	3, 6,12,13,17,19
					22406	FO17/15W/835/XP/SS/ECO3	30	24000	40000	40000	42000	3500	85	1200 (1130)	3, 6,12,13,17,19
					22407	FO17/15W/841/XP/SS/ECO3	30	24000	40000	40000	42000	4100	85	1200 (1130)	3, 6,12,13,17,19
21	T8	36	35.78	Med Bipin	22395	FO25/21W/835/XP/SS/ECO3	30	24000	40000	40000	42000	3500	85	1925 (1810)	3, 6,12,13,17,19
					22396	FO25/21W/841/XP/SS/ECO3	30	24000	40000	40000	42000	3500	85	1925 (1810)	3, 6,12,13,17,19
30	T8	48	47.78	Med Bipin	22063	FO30/830/XP/SS/ECO3	30	24000	40000	40000	42000	3000	85	2850 (2680)	E, 3, 6,12,13,17,19
					22060	FO30/835/XP/SS/ECO3	30	24000	40000	40000	42000	3500	85	2850 (2680)	E, 3, 6,12,13,17,19
					22062	FO30/841/XP/SS/ECO3	30	24000	40000	40000	42000	4100	85	2850 (2680)	E, 3, 6,12,13,17,19
					22202	FO30/850/XP/SS/ECO3	30	24000	40000	40000	42000	5000	81	2850 (2680)	E, 3, 6,12,13,17,19

OCTRON 800 XP ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
17	T8	24	23.78	Med Bipin	21587	FO17/827/XP/ECO3	30	24000	40000	40000	42000	2700	85	1375 (1290)	3, 12,13,17,19
					21785	FO17/830/XP/ECO3	30	24000	40000	40000	42000	3000	85	1375 (1290)	3, 12,13,17,19
					21778	FO17/835/XP/ECO3	30	24000	40000	40000	42000	3500	85	1375 (1290)	3, 12,13,17,19
					21907	FO17/841/XP/ECO3	30	24000	40000	40000	42000	4100	85	1375 (1290)	3, 12,13,17,19
					22193	FO17/850/XP/ECO3	30	24000	40000	40000	42000	5000	85	1375 (1290)	13,17,19
					21718	FO17/865/XP/ECO	30	24000	40000	40000	420000	6500	85	1250 (1175)	3, 12,13,17,19
25	T8	36	35.78	Med Bipin	21910	FO25/830/XP/ECO3	30	24000	40000	40000	42000	3000	85	2175 (2045)	3, 12,13,17,19
					21776	FO25/835/XP/ECO3	30	24000	40000	40000	42000	3500	85	2175 (2045)	3, 12,13,17,19
					21774	FO25/841/XP/ECO3	30	24000	40000	40000	42000	4100	85	2175 (2045)	3, 12,13,17,19
					22194	FO25/850/XP/ECO3	30	24000	40000	40000	42000	5000	85	2175 (2045)	3, 12,13,17,19
					21719	FO25/865/XP/ECO	30	24000	40000	40000	42000	6500	85	2025 (1905)	3, 12,13,17,19

T8 Medium Bipin (1" diameter)

OCTRON 800 XP ECOLOGIC Lamps (Cont.)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
32	T8	48	47.78	Med Bipin	22039	FO32/827/XP/ECO3	30	24000	40000	40000	42000	2700	85	3000 (2820)	,Ⓔ,,3, 12,13,17,19
					21759	FO32/830/XP/ECO3	30	24000	40000	40000	42000	3000	85	3000 (2820)	,Ⓔ,,3, 12,13,17,19
					21763	FO32/835/XP/ECO3	30	24000	40000	40000	42000	3500	85	3000 (2820)	,Ⓔ,,3, 12,13,17,19
					21767	FO32/841/XP/ECO3	30	24000	40000	40000	42000	4100	85	3000 (2820)	,Ⓔ,,3, 12,13,17,19
					22026	FO32/850/XP/ECO3	30	24000	40000	40000	42000	5000	85	3000 (2820)	,Ⓔ,,3, 12,13,17,19
					21720	FO32/865/XP/ECO	30	24000	40000	40000	42000	6500	85	2900 (2725)	,Ⓔ,,3, 12,13,17,19
					22594	FO32/SKYWHITE/XP/ECO3	30	24000	40000	40000	42000	8000	85	2650 (2490)	,,3, 12,13,17,19
40	T8	60	59.61	Med Bipin	21912	FO40/830/XP/ECO3	30	24000	40000	40000	42000	3000	85	3750 (3525)	,,3, 12,13,17,19
					21911	FO40/835/XP/ECO3	30	24000	40000	40000	42000	3500	85	3750 (3525)	,,3, 12,13,17,19
					21916	FO40/841/XP/ECO3	30	24000	40000	40000	42000	4100	85	3750 (3525)	,,3, 12,13,17,19
					21721	FO40/865/XP/ECO3	30	24000	40000	40000	42000	6500	85	3650 (3430)	,,3, 12,13,17,19

OCTRON 800 XV ECOLOGIC SUPERSAVER Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
25	T8	48	47.78	Med Bipin	22454	FO32/25W/830/XV/SS/ECO	30	24000	40000	40000	42000	3000	83	2400 (2255)	,Ⓔ,,3, 6,12,13,17,19
					22449	FO32/25W/835/XV/SS/ECO	30	24000	40000	40000	42000	3500	83	2400 (2255)	,Ⓔ,,3, 6,12,13,17,19
					22450	FO32/25W/841/XV/SS/ECO	30	24000	40000	40000	42000	4100	83	2400 (2255)	,Ⓔ,,3, 6,12,13,17,19
					22451	FO32/25W/850/XV/SS/ECO	30	24000	40000	40000	42000	5000	81	2400 (2255)	,Ⓔ,,3, 6,12,13,17,19
28	T8	48	47.78	Med Bipin	21429	FO28/830/XV/SS/ECO	30	24000	40000	40000	42000	3000	83	2600 (2445)	,Ⓔ,,3, 6,12,13,17,19
					21420	FO28/835/XV/SS/ECO	30	24000	40000	40000	42000	3500	83	2600 (2445)	,Ⓔ,,3, 6,12,13,17,19
					21421	FO28/841/XV/SS/ECO	30	24000	40000	40000	42000	4100	83	2600 (2445)	,Ⓔ,,3, 6,12,13,17,19
					21422	FO28/850/XV/SS/ECO	30	24000	40000	40000	42000	5000	81	2600 (2445)	,Ⓔ,,3, 6,12,13,17,19
30	T8	48	47.78	Med Bipin	21428	FO30/830/XV/SS/ECO	30	24000	40000	40000	42000	3000	83	2750 (2585)	,Ⓔ,,3, 6,12,13,17,19
					22446	FO30/835/XV/SS/ECO	30	24000	40000	40000	42000	3500	83	2750 (2585)	,Ⓔ,,3, 6,12,13,17,19

T8 Medium Bipin (1" diameter)

OCTRON® ECOLOGIC® T8 FLUORESCENT LAMPS (CONT.)

OCTRON 800 XV ECOLOGIC SUPERSAVER Lamps (Cont.)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
30	T8	48	47.78	Med Bipin	22447	F030/841/XV/SS/ECO	30	24000	40000	40000	42000	4100	83	2750 (2585)	6,12,13,17,19
					22448	F030/850/XV/SS/ECO	30	24000	40000	40000	42000	5000	81	2750 (2585)	6,12,13,17,19

OCTRON XV 800 ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
32	T8	48	47.78	Med Bipin	21427	F032/830/XV/ECO	30	24000	40000	40000	42000	3000	83	2900 (2725)	12,13,17,19
					20066	F032/835/XV/ECO	30	24000	40000	40000	42000	3500	83	2900 (2725)	12,13,17,19
					20067	F032/841/XV/ECO	30	24000	40000	40000	42000	4100	83	2900 (2725)	12,13,17,19
					20068	F032/850/XV/ECO	30	24000	40000	40000	42000	5000	81	2900 (2725)	12,13,17,19

OCTRON 800 ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
17	T8	24	23.78	Med Bipin	22135	F017/830/ECO	30	24000	30000	30000	36000	3000	82	1350 (1270)	12,13,17,19
					22136	F017/835/ECO	30	24000	30000	30000	36000	3500	82	1350 (1270)	12,13,17,19
					22137	F017/841/ECO	30	24000	30000	30000	36000	4100	82	1350 (1270)	12,13,17,19
25	T8	36	35.78	Med Bipin	22138	F025/830/ECO	30	24000	30000	30000	36000	3000	82	2150 (2020)	12,13,17,19
					22139	F025/835/ECO	30	24000	30000	30000	36000	3500	82	2150 (2020)	12,13,17,19
					22140	F025/841/ECO	30	24000	30000	30000	36000	4100	82	2150 (2020)	12,13,17,19
32	T8	48	47.78	Med Bipin	21777	F032/830/ECO	30	24000	30000	30000	36000	3000	85	2950 (2775)	12,13,17,19
					21779	F032/835/ECO	30	24000	30000	30000	36000	3500	85	2950 (2775)	12,13,17,19
					22183	F032/835/ECO/2/30	30	24000	30000	30000	36000	3500	82	2950 (2775)	12,13,17,19
					21781	F032/841/ECO	30	24000	30000	30000	36000	4100	85	2950 (2775)	12,13,17,19
					22143	F032/850/ECO	30	24000	30000	30000	36000	5000	81	2950 (2775)	12,13,17,19

T8 Single Pin (1" diameter)

T8 Medium Bipin (1" diameter)

OCTRON 800 ECOLOGIC Lamps (Cont.)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
40	T8	60	59.61	Med Bipin	22144	FO40/830/ECO	30	24000	30000	30000	36000	3000	82	3650 (3430)	3, 12,13,17,19
					22145	FO40/835/ECO	30	24000	30000	30000	36000	3500	82	3650 (3430)	3, 12,13,17,19
					22146	FO40/841/ECO	30	24000	30000	30000	36000	4100	82	3650 (3430)	3, 12,13,17,19

OCTRON 700 XP ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
32	T8	48	47.78	Med Bipin	21711	FO32/730/XP/ECO	30	24000	36000	40000	42000	3000	78	2850 (2680)	3, 17,19,30,33
					22044	FO32/735/XP/ECO	30	24000	36000	40000	42000	3500	78	2850 (2680)	3, 17,19,30,33
					21712	FO32/741/XP/ECO	30	24000	36000	40000	42000	4100	78	2850 (2680)	3, 17,19,30,33

OCTRON 700 ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
13	T8	18	17.91	Med Bipin	21666	FO13/735/ECO	30	24000	28000	30000	35000	3500	75	830 (745)	3,12, 13,17,19,36
17	T8	24	23.78	Med Bipin	21918	FO17/730/ECO	30	24000	28000	30000	35000	3000	75	1300 (1170)	3,12, 13,17,19,36
					21769	FO17/735/ECO	30	24000	28000	30000	35000	3500	75	1300 (1170)	3,12, 13,17,19,36
					21770	FO17/741/ECO	30	24000	28000	30000	35000	4100	75	1300 (1170)	3,12, 13,17,19,36
25	T8	36	35.74	Med Bipin	21937	FO25/730/ECO	30	24000	28000	30000	35000	3000	78	1950 (1775)	3,12, 13,17,19,36
					21941	FO25/735/ECO	30	24000	28000	30000	35000	3500	78	1950 (1775)	3,12, 13,17,19,36
					21942	FO25/741/ECO	30	24000	28000	30000	35000	4100	78	1950 (1775)	3,12, 13,17,19,36
32	T8	48	47.78	Med Bipin	21997	FO32/730/ECO	30	24000	28000	30000	35000	3000	78	2600 (2390)	E, 3, 12,13,17,19,36
					21998	FO32/735/ECO	30	24000	28000	30000	35000	3500	78	2600 (2390)	E, 3, 12,13,17,19,36
					21999	FO32/741/ECO	30	24000	28000	30000	35000	4100	78	2600 (2390)	E, 3, 12,13,17,19,36

T8 Medium Bipin (1" diameter)

T8 Single Pin (1" diameter)

OCTRON® ECOLOGIC® T8 FLUORESCENT LAMPS (CONT.)

OCTRON 700 ECOLOGIC Lamps (Cont.)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
32	T8	48	47.78	Med Bipin	22141	F032/750/ECO	30	24000	28000	30000	35000	5000	78	2550 (2345)	,Ⓔ,,3, 12,13,17,19,36
					22175	F032/765/ECO	30	24000	28000	30000	35000	6500	78	2550 (2345)	,Ⓔ,,3, 12,13,17,19,36
40	T8	60	59.61	Med Bipin	22102	F040/730/ECO	30	24000	28000	30000	35000	3000	75	3500 (3150)	,,3,12, 13,17,19,36
					22103	F040/735/ECO	30	24000	28000	30000	35000	3500	75	3500 (3150)	,,3,12, 13,17,19,36
					22104	F040/741/ECO	30	24000	28000	30000	35000	4100	75	3500 (3150)	,,3,12, 13,17,19,36

OCTRON 800XP 8-Foot SUPERSAVER® ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
54	T8	96	94.00	Single Pin	22100	F096/54W/835/XP/SS/ECO3	24	24000	36000	3500	85	5700 (5360)	,Ⓔ,,3, 5,12,13,17
					22101	F096/54W/841/XP/SS/ECO3	24	24000	36000	4100	85	5700 (5360)	,Ⓔ,,3, 5,12,13,17
					22347	F096/54W/850/XP/SS/ECO3	24	24000	36000	5000	85	5700 (5075)	,Ⓔ,,3, 5,12,13,17
50	T8	96	94.00	Single Pin	22420	F096/50W/835/XP/SS/ECO3	24	24000	36000	3500	85	5400 (5075)	,Ⓔ,,3, 5,12,13,17
					22421	F096/50W/841/XP/SS/ECO3	24	24000	36000	4100	85	5400 (5075)	,Ⓔ,,3, 5,12,13,17

OCTRON 800 XP 4, 6, and 8-Foot ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
28	T8	48	46.00	Single Pin	21599	F048/835/XP/ECO	24	24000	36000	3500	85	2850 (2680)	,,3, 12,13,17
44	T8	72	70.00	Single Pin	21598	F072/835/XP/ECO	24	24000	36000	3500	85	4650 (4370)	,,3, 12,13,17
59	T8	96	94.00	Single Pin	22036	F096/830/XP/ECO	24	24000	36000	3000	85	6100 (5730)	,Ⓔ,, 3,12,13,17
					22034	F096/835/XP/ECO	24	24000	36000	3500	85	6100 (5730)	,Ⓔ, 3,12,13,17
					22032	F096/841/XP/ECO	24	24000	36000	4100	85	6100 (5730)	,Ⓔ, 3,12,13,17
					22174	F096/850/XP/ECO	24	24000	36000	5000	85	6100 (5730)	,Ⓔ, 3,12,13,17

T8 Single Pin (1" diameter)

OCTRON 800 XV 8-Foot SUPERSAVER ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
50	T8	96	94.00	Single Pin	21426	FO96/50W/835/XV/SS/ECO	24	24000	36000	3500	83	5100 (4795)	3, 5,12,13,17
					21425	FO96/50W/841/XV/SS/ECO	24	24000	36000	4100	83	5100 (4795)	3, 5,12,13,17
54	T8	96	94.00	Single Pin	21423	FO96/54W/835/XV/SS/ECO	24	24000	36000	3500	83	5400 (5075)	3, 5,12,13,17
					21424	FO96/54W/841/XV/SS/ECO	24	24000	36000	4100	83	5400 (5075)	3, 5,12,13,17

OCTRON 800 8-Foot ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
59	T8	96	94.00	Single Pin	22147	FO96/830/ECO	24	18000	24000	3000	82	5900 (5430)	3,12,13,17
					22148	FO96/835/ECO	24	18000	24000	3500	82	5900 (5430)	3,12,13,17
					22149	FO96/841/ECO	24	18000	24000	4100	82	5900 (5430)	3,12,13,17
					22173	FO96/850/ECO	24	18000	24000	5000	80	5900 (5430)	3,12,13,17

OCTRON 700 8-Foot ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
59	T8	96	94.00	Single Pin	22030	FO96/730/ECO	24	18000	24000	3000	75	5700 (5130)	3,12,13,17
					21737	FO96/735/ECO	24	18000	24000	3500	75	5700 (5130)	3,12,13,17
					21736	FO96/741/ECO	24	18000	24000	4100	75	5700 (5130)	3,12,13,17

T8 Medium Bipin (1" diameter)

T8 Recessed Double Contact (1" diameter)

OCTRON® ECOLOGIC® T8 FLUORESCENT LAMPS (CONT.)

OCTRON 8-Foot HO ECOLOGIC Lamps

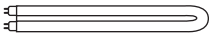
Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
86	T8	96	93.91	Recessed Dbl Contact	22204	FO96/735/HO/ECO	24	18000	27000	3500	78	8000 (7520)	,Ⓔ,,3, 12,13,17,36
					22206	FO96/835/HO/ECO	24	18000	27000	3500	85	8200 (7710)	,Ⓔ,,3, 12,13,17,36
					22205	FO96/741/HO/ECO	24	18000	27000	4100	78	8000 (7520)	,Ⓔ,,3, 12,13,17,36
					22207	FO96/841/HO/ECO	24	18000	27000	4100	85	8200 (7710)	,Ⓔ,,3, 12,13,17,36

OCTRON 950 Lamps (5000K, 90 CRI)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
14	T8	20	19.78	Med Bipin	21868	FO14/950/20in	30	15000	24000	20000	29000	5000	90	750 (640)	,3,12, 13,17,19
17	T8	24	23.78	Med Bipin	21871	FO17/950/24in	30	15000	24000	20000	29000	5000	90	800 (680)	,3,12, 13,17,19
21	T8	30	29.78	Med Bipin	21869	FO21/950/30in	30	15000	24000	20000	29000	5000	90	1000 (850)	,3,12, 13,17,19
25	T8	36	35.78	Med Bipin	21872	FO25/950/36in	30	15000	24000	20000	29000	5000	90	1250 (1065)	,3,12, 13,17,19
28	T8	40	39.78	Med Bipin	21870	FO28/950/40in	30	15000	24000	20000	29000	5000	90	1400 (1190)	,3,12, 13,17,19
32	T8	48	47.78	Med Bipin	21880	FO32/950/48in	30	15000	24000	20000	29000	5000	90	1800 (1530)	,3,12, 13,17,19
40	T8	60	59.61	Med Bipin	21873	FO40/950/60in	30	15000	24000	20000	29000	5000	90	2200 (1870)	,3,12, 13,17,19

OCTRON Gold Filter Fluorescent Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
32	T8	48	47.78	Med Bipin	21579	FO32/GOLD/ECO	12	24000	30000	30000	36000	1700 (1530)	,,3, 13,16,17,19



T8 U-Shaped 1-5/8" leg spacing (1" diameter)

OCTRON T8 CURVALUME FLUORESCENT LAMPS

OCTRON 800 XP SUPERSAVER CURVALUME U-shaped Ecologic Lamps – 1 5/8" Leg Spacing

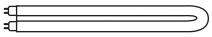
Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
29	T8	22.5	22.6	Med Bipin	22195	FBO29/830XP/SS/ECO	15	18000	24000	24000	30000	3000	85	2500 (2375)	,Ⓔ,,3,12, 13,17,19,20,27
					22196	FBO29/835XP/SS/ECO	15	18000	24000	24000	30000	3500	85	2500 (2375)	,Ⓔ,,3,12, 13,17,19,20,27
					22197	FBO29/841XP/SS/ECO	15	18000	24000	24000	30000	4100	85	2500 (2375)	,Ⓔ,,3,12, 13,17,19,20,27

OCTRON 800XP CURVALUME U-shaped Ecologic Lamps – 1 5/8" Leg Spacing

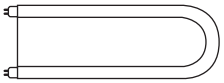
Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
31	T8	22.5	22.6	Med Bipin	21693	FBO31/830/XP/ECO	15	18000	24000	24000	30000	3000	85	2775 (2610)	,Ⓔ,,3,12, 13,17,19,20
					21695	FBO31/835/XP/ECO	15	18000	24000	24000	30000	3500	85	2775 (2610)	,Ⓔ,,3,12, 13,17,19,20
					21696	FBO31/841/XP/ECO	15	18000	24000	24000	30000	4100	85	2775 (2610)	,Ⓔ,,3,12, 13,17,19,20

OCTRON 800 CURVALUME U-shaped Lamps – 1 5/8" Leg Spacing

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
16	T8	10.5	10.6	Med Bipin	21834	FBO16/830	15	15000	24000	20000	28000	3000	82	1125 (1060)	,,3,12, 13,17,19,20
					21835	FBO16/835	15	15000	24000	20000	28000	3500	82	1125 (1060)	,,3,12, 13,17,19,20
					21836	FBO16/841	15	15000	24000	20000	28000	4100	82	1125 (1060)	,,3,12, 13,17,19,20



T8 U-Shaped 1-5/8" leg spacing (1" diameter)



T8 U-Shaped 6" leg spacing (1" diameter)

OCTRON® T8 CURVALUME FLUORESCENT LAMPS (CONT.)

OCTRON 800 CURVALUME U-shaped Lamps – 1 5/8" Leg Spacing (Cont.)

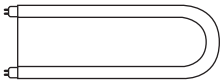
Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
24	T8	16.5	16.6	Med Bipin	21874	FB024/830	15	15000	24000	20000	28000	3000	82	1925 (1810)	,,3,12, 13,17,19,20
					21875	FB024/835	15	15000	24000	20000	28000	3500	82	1925 (1810)	,,3,12, 13,17,19,20
					21876	FB024/841	15	15000	24000	20000	28000	4100	82	1925 (1810)	,,3,12, 13,17,19,20
31	T8	22.5	22.6	Med Bipin	21819	FB031/750	15	15000	24000	20000	28000	5000	75	2600 (2340)	,Ⓔ,,3, 12,13,17,19,20
					21877	FB031/830	15	15000	24000	20000	28000	3000	82	2725 (2560)	,Ⓔ,,3, 12,13,17,19,20
					21878	FB031/835	15	15000	24000	20000	28000	3500	82	2725 (2560)	,Ⓔ,,3, 12,13,17,19,20
					21879	FB031/841	15	15000	24000	20000	28000	4100	82	2725 (2560)	,Ⓔ,,3, 12,13,17,19,20

OCTRON 800 XP SUPERSAVER CURVALUME U-shaped Ecologic Lamps – 6" Leg Spacing

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
28	T8	22.5	22.6	Med Bipin	22304	FB028/835XP/6/SS/ECO	16	18000	26000	24000	30000	3500	85	2550 (2435)	,Ⓔ,,3, 12,13,17,19,20
					22305	FB028/841XP/6/SS/ECO	16	18000	26000	24000	30000	4100	85	2550 (2435)	,Ⓔ,,3, 12,13,17,19,20
30	T8	22.5	22.6	Med Bipin	22170	FB030/830XP/6/SS/ECO	16	18000	26000	24000	30000	3000	85	2800 (2630)	,Ⓔ,,3, 12,13,17,19,20
					22171	FB030/835XP/6/SS/ECO	16	18000	26000	24000	30000	3500	85	2800 (2630)	,Ⓔ,,3, 12,13,17,19,20
					22172	FB030/841XP/6/SS/ECO	16	18000	26000	24000	30000	4100	85	2800 (2630)	,Ⓔ,,3, 12,13,17,19,20

OCTRON 800XP and XPS CURVALUME U-shaped Ecologic Lamps – 6" Leg Spacing

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
32	T8	22.5	22.6	Med Bipin	22054	FB032/830XP/6/ECO	16	18000	26000	24000	30000	3000	85	2900 (2725)	,Ⓔ,,3, 12,13,17,19,20
					22055	FB032/835XP/6/ECO	16	18000	26000	24001	30000	3500	85	2900 (2725)	,Ⓔ,,3, 12,13,17,19,20
					22057	FB032/841XP/6/ECO	16	18000	26000	24002	30000	4100	85	2900 (2725)	,Ⓔ,,3, 12,13,17,19,20
					22168	FB032/850XPS/6/ECO	16	18000	26000	24003	30000	5000	85	2980 (2725)	,Ⓔ,,3, 12,13,17,19,20



T8 U-Shaped 6" leg spacing (1" diameter)

OCTRON 800 CURVALUME U-shaped Ecologic Lamps – 6" Leg Spacing

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
32	T8	22.5	22.6	Med Bipin	21663	FBO32/830/6/ECO	16	15000	24000	20000	28000	3000	82	2850 (2680)	,Ⓔ,,3, 12,13,17,19,20
					21670	FBO32/835/6/ECO	16	15000	24000	20000	28000	3500	82	2850 (2680)	,Ⓔ,,3, 12,13,17,19,20
					21671	FBO32/841/6/ECO	16	15000	24000	20000	28000	4100	82	2850 (2680)	,Ⓔ,,3, 12,13,17,19,20

OCTRON 700 CURVALUME U-shaped Ecologic – 6" Leg Spacing

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Life @ 3hrs/ start IS	Life @ 12hrs/ start IS	Life @ 3hrs/ start PRS	Life @ 12hrs/ start PRS	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
32	T8	22.5	22.6	Med Bipin	22046	FBO32/730/6/ECO	16	15000	24000	20000	28000	3000	75	2750 (2475)	,Ⓔ,,3, 12,13,17,19,20
					22051	FBO32/735/6/ECO	16	15000	24000	20000	28000	3500	75	2750 (2475)	,Ⓔ,,3, 12,13,17,19,20
					22052	FBO32/741/6/ECO	16	15000	24000	20000	28000	4100	75	2750 (2475)	,Ⓔ,,3, 12,13,17,19,20
					22053	FBO32/750/6/ECO	16	15000	24000	20000	28000	5000	75	2625 (2475)	,Ⓔ,,3, 12,13,17,19,20

PENTRON® T5 & T5HO FLUORESCENT LAMPS

PENTRON XP PREMIER ECOLOGIC® High Performance T5 Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	Average Rated Life Hours per start 12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 35ºC/95ºF	Notes
28	T5	48	45.8	Mini Bipin	21060	FP28/830/PM/XP/ECO	40	30000	36000	3000	85	2800 (2600)	3125 (2900)	3,12, 13,14,17,24
					21057	FP28/835/PM/XP/ECO	40	30000	36000	3500	85	2800 (2600)	3125 (2900)	3,12, 13,14,17,24
					21058	FP28/841/PM/XP/ECO	40	30000	36000	4100	85	2800 (2600)	3125 (2900)	3,12, 13,14,17,24

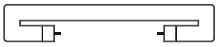
PENTRON PREMIER High Performance T5 ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	Average Rated Life Hours per start 12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 35ºC/95ºF	Notes
28	T5	48	45.8	Mini Bipin	20948	FP28/830/PM/ECO	40	30000	36000	3000	85	2730 (2590)	3050 (2900)	3,12, 13,14,17,24
					20943	FP28/835/PM/ECO	40	30000	36000	3500	85	2730 (2590)	3050 (2900)	3,12, 13,14,17,24
					20944	FP28/841/PM/ECO	40	30000	36000	4100	85	2730 (2590)	3050 (2900)	3,12, 13,14,17,24

PENTRON SUPERSAVER® ECOLOGIC High Performance T5 Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	Average Rated Life Hours per start 12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 35ºC/95ºF	Notes
13	T5	24	22.5	Mini Bipin	21303	FP14/13W/830/SS/ECO	40	25000	30000	3000	85	1200 (1140)	1350 (1285)	3,12, 13,14,17,24
					21304	FP14/13W/835/SS/ECO	40	25000	30000	3500	85	1200 (1140)	1350 (1285)	3,12, 13,14,17,24
					21305	FP14/13W/841/SS/ECO	40	25000	30000	4100	85	1200 (1140)	1350 (1285)	3,12, 13,14,17,24
19	T5	36	34	Mini Bipin	21306	FP21/19W/830/SS/ECO	40	25000	30000	3000	85	1900 (1805)	2100 (1995)	3,12, 13,14,17,24
					21307	FP21/19W/835/SS/ECO	40	25000	30000	3500	85	1900 (1805)	2100 (1995)	3,12, 13,14,17,24
					21308	FP21/19W/841/SS/ECO	40	25000	30000	4100	85	1900 (1805)	2100 (1995)	3,12, 13,14,17,24
26	T5	48	45.8	Mini Bipin	21309	FP28/26W/830/SS/ECO	40	30000	36000	3000	85	2600 (2470)	2900 (2755)	3,12, 13,14,17,24
					21310	FP28/26W/835/SS/ECO	40	30000	36000	3500	85	2600 (2470)	2900 (2755)	3,12, 13,14,17,24
					21311	FP28/26W/841/SS/ECO	40	30000	36000	4100	85	2600 (2470)	2900 (2755)	3,12, 13,14,17,24

T5 Miniature Bipin (5/8" diameter)



PENTRON T5 and T5HO SEAMLESS (5/8" diameter)

PENTRON High Perfomance T5 ECOLOGIC® Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Initial (Mean) at 35ºC/95ºF	Notes
14	T5	24	22.5	Mini Bipin	20907	FP14/830/ECO	40	25000	28000	3000	85	1200 (1140)	1350 (1285)	3,12, 13,14,17,24
					20908	FP14/835/ECO	40	25000	28000	3500	85	1200 (1140)	1350 (1285)	3,12, 13,14,17,24
					20914	FP14/841/ECO	40	25000	28000	4100	85	1200 (1140)	1350 (1285)	3,12, 13,14,17,24
					20988	FP14/865/ECO	40	25000	28000	6500	85	1100 (1140)	1300 (1285)	3,12, 13,14,17,24
21	T5	36	34	Mini Bipin	20919	FP21/830/ECO	40	25000	28000	3000	85	1900 (1805)	2100 (1995)	3,12, 13,14,17,24
					20921	FP21/835/ECO	40	25000	28000	3500	85	1900 (1805)	2100 (1995)	3,12, 13,14,17,24
					20924	FP21/841/ECO	40	25000	28000	4000	85	1900 (1805)	2100 (1995)	3,12, 13,14,17,24
					20989	FP21/865/ECO	40	25000	28000	6500	85	1750 (1665)	2000 (1900)	3,12, 13,14,17,24
28	T5	48	45.8	Mini Bipin	20868	FP28/830/ECO	40	30000	36000	3000	85	2600 (2470)	2900 (2755)	3,12, 13,14,17,24
					20901	FP28/835/ECO	40	30000	36000	3500	85	2600 (2470)	2900 (2755)	3,12, 13,14,17,24
					20902	FP28/841/ECO	40	30000	36000	4100	85	2600 (2470)	2900 (2755)	3,12, 13,14,17,24
					22203	FP28/850/ECO	40	30000	36000	5000	85	2535 (2840)	2840 (2700)	3,12, 13,14,17,24
					20990	FP28/865/ECO	40	30000	36000	6500	85	2400 (2750)	2750 (2615)	3,12, 13,14,17,24
35	T5	60	57.6	Mini Bipin	20925	FP35/830/ECO	40	25000	28000	3000	85	3300 (3135)	3650 (3470)	3,12, 13,14,17,24
					20926	FP35/835/ECO	40	25000	28000	3500	85	3300 (3135)	3650 (3470)	3,12, 13,14,17,24
					20927	FP35/841/ECO	40	25000	28000	4100	85	3300 (3135)	3650 (3470)	3,12, 13,14,17,24

PENTRON HO XL High Output Extended Life High Performance T5 ECOLOGIC Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Initial (Mean) at 35ºC/95ºF	Notes
54	T5	48	45.8	Mini Bipin	20197	FP54/835/HO/XL/ECO	40	45000	60000	3500	85	4450 (4140)	5000 (4650)	3,12, 13,14,17,24
					20198	FP54/841/HO/XL/ECO	40	45000	60000	4100	85	4450 (4140)	5000 (4650)	3,12, 13,14,17,24
					20199	FP54/850/HO/XL/ECO	40	45000	60000	5000	85	4360 (4055)	4900 (4560)	3,12, 13,14,17,24

PENTRON® T5 & T5HO FLUORESCENT LAMPS (CONT.)

PENTRON High Output SUPERSAVER® High Performance T5 ECOLOGIC® Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	Average Rated Life Hours per start 12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 35ºC/95ºF	Notes
21	T5	24	22.2	Mini Bipin	20192	FP24/21W/830/HO/SS/ECO	40	30000	40000	3000	85	1750 (1630)	2000 (1860)	3,12, 13,14,17,24
					20193	FP24/21W/835/HO/SS/ECO	40	30000	40000	3500	85	1760 (1630)	2000 (1860)	3,12, 13,14,17,24
					20200	FP24/21W/841/HO/SS/ECO	40	30000	40000	4100	85	1760 (1630)	2000 (1860)	3,12, 13,14,17,24
35	T5	36	34	Mini Bipin	20188	FP39/35W/830/HO/SS/ECO	40	30000	40000	3000	85	3100 (2885)	3500 (3255)	3,12, 13,14,17,24
					20189	FP39/35W/835/HO/SS/ECO	40	30000	40000	3500	85	3100 (2885)	3500 (3255)	3,12, 13,14,17,24
					20190	FP39/35W/841/HO/SS/ECO	40	30000	40000	4100	85	3100 (2885)	3500 (3255)	3,12, 13,14,17,24
47	T5	48	45.8	Mini Bipin	20447	FP54/47W/841/HO/SS/ECO	40	40000	45000	4100	82	4050 (3765)	4575 (4255)	3,12, 13,14,17,24
					20448	FP54/47W/850/HO/SS/ECO	40	40000	45000	5000	82	3950 (3675)	4390 (4085)	3,12, 13,14,17,24
50	T5	48	45.8	Mini Bipin	21070	FP54/50W/830/HO/SS/ECO	40	40000	45000	3000	85	4450 (4140)	5000 (4650)	3,12, 13,14,17,24
					21071	FP54/50W/835/HO/SS/ECO	40	40000	45000	3500	85	4450 (4140)	5000 (4650)	3,12, 13,14,17,24
					20964	FP54/50W/841/HO/SS/ECO	40	40000	45000	4100	85	4450 (4140)	5000 (4650)	3,12, 13,14,17,24
					21072	FP54/50W/850/HO/SS/ECO	40	40000	45000	5000	82	4250 (3955)	4800 (4465)	3,12, 13,14,17,24

PENTRON High Output High Performance T5 ECOLOGIC® Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	Average Rated Life Hours per start 12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 35ºC/95ºF	Notes
24	T5	24	22.2	Mini Bipin	20928	FP24/830/HO/ECO	40	30000	36000	3000	85	1750 (1630)	2000 (1860)	3,12, 13,14,17,24
					20929	FP24/835/HO/ECO	40	30000	36000	3500	85	1750 (1630)	2000 (1860)	3,12, 13,14,17,24
					20931	FP24/841/HO/ECO	40	30000	36000	4100	85	1750 (1630)	2000 (1860)	3,12, 13,14,17,24
39	T5	36	34	Mini Bipin	20932	FP39/830/HO/ECO	40	30000	36000	3000	85	3100 (2885)	3500 (3255)	3,12, 13,14,17,24
					20933	FP39/835/HO/ECO	40	30000	36000	3500	85	3100 (2885)	3500 (3255)	3,12, 13,14,17,24
					20934	FP39/841/HO/ECO	40	30000	36000	4100	85	3100 (2885)	3500 (3255)	3,12, 13,14,17,24
54	T5	48	45.8	Mini Bipin	20903	FP54/830/HO/ECO	40	40000	45000	3000	85	4450 (4140)	5000 (4650)	3,12, 13,14,17,24
					20904	FP54/835/HO/ECO	40	40000	45000	3500	85	4450 (4140)	5000 (4650)	3,12, 13,14,17,24

PENTRON High Output High Performance T5 ECOLOGIC® Lamps (Cont.)

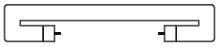
Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	Average Rated Life Hours per start 12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 35ºC/95ºF	Notes
54	T5	48	45.8	Mini Bipin	20906	FP54/841/HO/ECO	40	40000	45000	4100	85	4450 (4140)	5000 (4650)	3,12, 13,14,17,24
					20949	FP54/850/HO/ECO	40	40000	45000	5000	85	4310 (4140)	4900 (4555)	3,12, 13,14,17,24
					20862	FP54/865/HO/ECO	40	40000	45000	6500	85	4100 (3700)	4750 (4420)	3,12, 13,14,17,24
80	T5	60	57.6	Mini Bipin	20935	FP80/830/HO/ECO	40	25000	30000	3000	85	6150 (5720)	7000 (6510)	3,12, 13,14,17,24
					20936	FP80/835/HO/ECO	40	25000	30000	3500	85	6150 (5720)	7000 (6510)	3,12, 13,14,17,24
					20937	FP80/841/HO/ECO	40	25000	30000	4100	85	6150 (5720)	7000 (6510)	3,12, 13,14,17,24

PENTRON High Output Amalgam Wide Temperature Range T5 ECOLOGIC® Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	Average Rated Life Hours per start 12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 35ºC/95ºF	Notes
54	T5	48	45.8	Mini Bipin	21042	FP54/835/C/HO/ECO	40	25000	35000	3500	85	4900 (4655)	4900 (4655)	3,12,13, 14,17,24,34
					21043	FP54/841/C/HO/ECO	40	25000	35000	4100	85	4900 (4655)	4900 (4655)	3,12,13, 14,17,24,34
					21044	FP54/850/C/HO/ECO	40	25000	35000	5000	85	4800 (4655)	4800 (4655)	3,12,13, 14,17,24,34

PENTRON High Performance SEAMLESS T5 Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	Average Rated Life Hours per start 12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 35ºC/95ºF	Notes
14	T5	24	22.9	Mini Bipin	20098	FP14/HE/SLS/830	25	20000	22000	3000	85	1060 (985)	1200 (1115)	3,12, 13,14,17,24
					20099	FP14/HE/SLS/840	25	20000	22000	4000	85	1060 (985)	1200 (1115)	3,12, 13,14,17,24
21	T5	36	34.7	Mini Bipin	20100	FP21/HE/SLS/830	25	20000	22000	3000	85	1680 (1560)	1900 (1765)	3,12, 13,14,17,24
					20101	FP21/HE/SLS/840	25	20000	22000	4000	85	1680 (1560)	1900 (1765)	3,12, 13,14,17,24
28	T5	48	46.5	Mini Bipin	20102	FP28/HE/SLS/830	25	20000	22000	3000	85	2300 (2140)	2600 (2420)	3,12, 13,14,17,24
					20103	FP28/HE/SLS/840	25	20000	22000	4000	85	2300 (2140)	2600 (2420)	3,12, 13,14,17,24



PENTRON T5 and T5HO SEAMLESS (5/8" diameter)

CIRCLINE 4-Pin T5

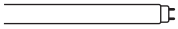
PENTRON® T5 & T5HO FLUORESCENT LAMPS (CONT.)

PENTRON High Output High Performance SEAMLESS T5HO Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life Hours per start 3hrs	Average Rated Life Hours per start 12hrs	CCT (K)	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Approx. Lumens Initial (Mean) at 35ºC/95ºF	Notes
24	T5	24	22.9	Mini Bipin	20182	FP24/830/HO/SLS/ECO	25	20000	22000	3000	85	1550 (1410)	1750 (1630)	,3,12, 13,14,17,24
					20183	FP24/840/HO/SLS/ECO	25	20000	22000	4000	85	1550 (1410)	1750 (1630)	,3,12, 13,14,17,24
39	T5	36	34.7	Mini Bipin	20184	FP39/830/HO/SLS/ECO	25	20000	22000	3000	85	2745 (2555)	3100 (2885)	,3,12, 13,14,17,24
					20185	FP39/840/HO/SLS/ECO	25	20000	22000	4000	85	2745 (2555)	3100 (2885)	,3,12, 13,14,17,24
54	T5	48	46.5	Mini Bipin	20186	FP54/830/HO/SLS/ECO	25	20000	22000	3000	85	3940 (3665)	4450 (4140)	,3,12, 13,14,17,24
					20187	FP54/840/HO/SLS/ECO	25	20000	22000	4000	85	3940 (3665)	4450 (4140)	,3,12, 13,14,17,24

PENTRON T5HO CIRCLINE

Nominal Wattage	Bulb Shape	Outside Diameter (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
22	T5	8.66-9.06	2GX13	20702	FPC22/830	12	12000	3000	80	1800 (1585)	,3,12,13,14,17,24
22	T5	8.66-9.07	2GX13	20712	FPC22/835	12	12000	3500	80	1800 (1585)	,3,12,13,14,17,24
40	T5	11.54-12.01	2GX13	20731	FPC40/830	12	12000	3000	80	3200 (2815)	,3,12,13,14,17,24
40	T5	11.54-12.02	2GX13	20732	FPC40/835	12	12000	3500	80	3200 (2815)	,3,12,13,14,17,24
55	T5	11.54-12.01	2GX13	20741	FPC55/830/HO	12	12000	3000	80	4200 (3520)	,3,12,13,14,17,24
55	T5	11.54-12.01	2GX13	20750	FPC55/835/HO	12	12000	3500	80	4200 (3520)	,3,12,13,14,17,24



T12 Medium Bipin (1-1/2" diameter)

T12 RAPID START FLUORESCENT LAMPS

4-Foot SUPERSAVER Rapid Start Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	Avg Rated Life @ 12/hrs start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
34	T12	48	47.78	Med Bipin	24588	F34CWX/SS (F40CWX/SS)	30	20000	28800	4100	87	1925 (1655)	,3, 8,12,13,17
					22425	F34T12/941/SS/ECO	30	20000	28800	4100	90	2650 (2450)	,★,Ⓔ, 3,8,12,13,17
					24599	F34/DX/SS (F40/DX/SS)	30	20000	28800	6500	88	1930 (1565)	,3, 8,12,13,17

4-Foot Standard Rapid Start Lamps

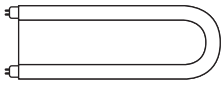
Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	Avg Rated Life @ 12/hrs start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
40	T12	48	47.78	Med Bipin	23505	F40/WX	30	20000	28800	3500	87	2100 (1805)	,3, 12,13,17,23
					24441	F40CWX	30	20000	28800	4100	87	2150 (1850)	,3, 12,13,17,23
					24683	F40DSGN50	30	20000	28800	5000	90	2200 (1890)	,3, 8,12,13,17
					24477	F40/DX	30	20000	28800	6500	88	2180 (1770)	,3, 8,12,13,17

3-Foot SUPERSAVER Rapid Start Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
25	T12	36	35.78	Med Bipin	23472	F25T12/CW/RS/SS (F30T12CWRSSS)	30	18000	4200	60	1925 (1635)	,3,7, 12,13,17

3-Foot Standard Rapid Start Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
30	T12	36	35.78	Med Bipin	23474	F30T12/D830/RS	30	18000	3000	80	2290 (2060)	,3,12,13,17
					23482	F30T12/WW/RS	30	18000	3000	52	2275 (1935)	,3,12,13,17
					23484	F30T12/D35/RS	30	18000	3500	70	2250 (1980)	,3,12,13,17
					23476	F30T12/CW/RS	30	18000	4200	60	2200 (1870)	,3,12,13,17
					23478	F30T12/D/RS	30	18000	6500	76	1900 (1615)	,3,12,13,17



U-Shaped T12 6" leg spacing (1-1/2" diameter)

CURVALUME® T12 SUPERSAVER® & CURVALUME STANDARD RAPID START LAMPS – USHAPED 6", LEG SPACING

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hr)	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
34	T12	22.5	22.6	Med Bipin	24965	FB34T12/930/6/SS/ECO	12	18000	3000	90	2600 (2340)	,3,8, 12,13,17,36
					24308	FB34T12/941/6/SS/ECO/UPC	12	20000	4100	90	2650 (2385)	,3,8, 12,13,17,36
40	T12	22.5	22.6	Med Bipin	24004	FB40/CWX/6	12	18000	4100	87	2100 (1785)	,3,12, 13,17,36

T12 RAPID START FLUORESCENT LAMPS

High Output (800mA) Rapid Start Lamps for Cold Temperatures

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
110	T12	96	93.91	Recessed Dbl Contact	25129	F96T12/CW/HO/CT/ECO	15	12000	4200	60	8600 (6965)	,,3,12, 13,17,25,36
					25134	F96T12/CW/HO/COLD TEMP	15	12000	4200	60	8600 (6965)	,3,12, 13,17,25
					25135	F96T12/D/HO/COLD TEMP	15	12000	6500	76	7600 (6155)	,3,12, 13,17,25

High Output (800mA) Standard Rapid Start Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
25	T12	16	15.91	Recessed Dbl Contact	25303	F18T12/DSGN50/HO	30	9000	5000	90	850 (740)	,3,12, 13,17
35	T12	24	21.91	Recessed Dbl Contact	25313	F24T12/CW/HO	30	9000	4200	60	1650 (1335)	,3,12, 13,17,
					25314	F24T12/D/HO	30	9000	6500	76	1400 (1135)	,3,12, 13,17
42	T12	36	27.91	Recessed Dbl Contact	25322	F30T12/CW/HO	30	9000	4200	60	2250 (1825)	,3,12, 13,17
45	T12	36	33.91	Recessed Dbl Contact	25333	F36T12/CW/HO	30	9000	4200	60	2850 (2310)	,3,12, 13,17
					25332	F36T12/D/HO	30	9000	6500	76	2500 (2310)	,3,12, 13,17
55	T12	42	39.91	Recessed Dbl Contact	25342	F42T12/CW/HO	30	9000	4200	60	3400 (2755)	,3,12, 13,17
					25343	F42T12/D/HO	30	9000	6500	76	3050 (2470)	,3,12, 13,17
60	T12	48	46.00	Recessed Dbl Contact	25154	F48T12/D35/HO	30	12000	3500	70	4250 (3825)	,3,12, 13,17
					25122	F48T12/CW/HO/ECO	30	12000	4200	60	4050 (3280)	,,3, 12,13,17
					25146	F48T12/CW/HO	30	12000	4200	60	4050 (3280)	,3,12, 13,17
					25150	F48T12/D/HO	30	12000	6500	76	3600 (2915)	,3,12, 13,17
					25153	F48T12/DSGN50/HO	30	12000	5000	90	3050 (2470)	,3,12, 13,17
75	T12	60	57.91	Recessed Dbl Contact	25128	F60T12/D35/HO	30	12000	3500	70	5600 (5040)	,3,12, 13,17
					25126	F60T12/CW/HO	30	12000	4200	60	5200 (4210)	,3,12, 13,17
					25120	F60T12/D/HO	30	12000	6500	76	4600 (3825)	,3,12, 13,17
80	T12	64	61.91	Recessed Dbl Contact	25352	F64T12/CW/HO	30	12000	4200	60	5750 (4660)	,3,12, 13,17
					25353	F64T12/D/HO	30	12000	6500	76	4900 (3970)	,3,12, 13,17

T12 RAPID START FLUORESCENT LAMPS (CONT.)

High Output (800mA) Standard Rapid Start Lamps (Cont.)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
85	T12	72	69.91	Recessed Dbl Contact	25177	F72T12/WW/HO	15	12000	3000	52	6400 (5158)	3,12, 13,17
					27249	F72T12/D35/HO	15	12000	3500	70	6650 (5985)	3,12, 13,17
					25281	F72T12/D835/HO	15	12000	3500	80	6750 (6210)	3,12, 13,17
					25171	F72T12/CW/HO/ECO	15	12000	4200	60	6250 (5065)	3, 12,13,17
					25176	F72T12/CW/HO	15	12000	4200	60	6250 (5065)	3,12, 13,17
					25189	F72T12/D/HO	15	12000	6500	76	5550 (4494)	3,12, 13,17
100	T12	84	81.91	Recessed Dbl Contact	25384	F84T12/CW/HO	15	12000	4200	60	7550 (6115)	3,12, 13,17
					25385	F84T12/D/HO	15	12000	6500	76	6700 (5425)	3,12, 13,17
110	T12	96	93.91	Recessed Dbl Contact	25164	F96T12/DSGN50/HO	15	12000	5000	90	6450 (5225)	3,12, 13,17
					25037	F96T12/941/HO/SS/ECO	15	12000	4100	88	8000 (7600)	3, 12,13,17

Very High Output (1500mA) SUPERSAVER® Rapid Start Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
195	T12	96		Recessed Dbl Contact	25296	F96T12/CW/VHO/SS	15	10000	4200	60	13000 (9100)	3,11, 12,13,17

Very High Output (1500mA) Standard Rapid Start Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
115	T12	48	46	Recessed Dbl Contact	25248	F48T12/CW/VHO	30	10000	4200	60	6600 (4620)	3,12, 13,17
160	T12	72	69.91	Recessed Dbl Contact	25272	F72T12/CW/VHO	15	10000	4200	60	10600 (7420)	3,12, 13,17
215	T12	96	93.91	Recessed Dbl Contact	25209	F96T12/CW/VHO	15	10000	4200	60	14000 (9800)	3,12, 13,17
					25210	F96T12/D/VHO	15	10000	6500	76	11600 (8120)	3,12, 13,17

T12 Single Pin (1-1/2" diameter)

INSTANT START FLUORESCENT LAMPS

SLIMLINE SUPERSAVER® Instant Start Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
32	T12	48	46	Single Pin	24829	F48T12/D35/SS	30	9000	3500	70	2575 (2370)	,3,9, 12,13,17
					24823	F48T12/CW/SS	30	9000	4200	60	2450 (2200)	,3,9, 12,13,17
60	T12	96	94	Single Pin	23503	F96T12CWXSSUPC	15	12000	4100	87	3850 (3400)	,3,9, 12,13,17
					29828	F96T12/DX/SS	15	12000	6500	88	3860 (3400)	,3,9, 12,13,17

SLIMLINE Standard Instant Start Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
21	T12	24	22	Single Pin	22403	F24T12/CW	30	7500	4200	60	1150 (1000)	,3,12, 13,17
25	T12	42	40	Single Pin	24270	F42T6/WW	24	7500	3032	52	1825 (1605)	,3,12, 13,17
					24266	F42T6/CW	24	7500	4200	60	1750 (1540)	,3,12, 13,17
30	T12	36	34	Single Pin	23618	F36T12/CW	30	7500	4200	60	1970 (1735)	,3,12, 13,17
38	T12	64	62	Single Pin	26466	F64T6/CW	24	7500	4200	60	2800 (2465)	,3,12, 13,17
38	T8	72	70	Single Pin	27270	F72T8/WW	24	7500	3000	52	3100 (2730)	,3,12, 13,17
					27266	F72T8/CW	24	7500	4200	60	3050 (2685)	,3,12, 13,17
					27200	F72T8/D	24	7500	6500	76	2600 (2290)	,3,12, 13,17
39	T12	48	46	Single Pin	24832	F48T12/D35	30	9000	3500	70	3000 (2760)	,3,12, 13,17
					24827	F48T12/CW/ECO	30	9000	4200	60	2820 (2480)	,3, 12,13,17
					24830	F48T12/CW	30	9000	4200	60	2820 (2480)	,3,12, 13,17
50	T12	60		Single Pin	26001	F60T12/CW	30	12000	4200	60	3700 (325)	,3,12, 13,17
					26002	F60T12/D	30	1200	6500	76	3000 (2640)	,3,12, 13,17
52	T12	64	62	Single Pin	26403	F64T12/CW	30	1200	4200	60	3900 (3430)	,3,12, 13,17,36
					26404	F64T12/D	30	1200	6500	76	3300 (2905)	,3,12, 13,17,36

T12 Single Pin (1-1/2" diameter)

INSTANT START FLUORESCENT LAMPS (CONT.)

SLIMLINE Standard Instant Start Lamps (Cont.)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
55	T12	72	71	Single Pin	27255	F72T12/D830	15	12000	3000	80	4800 (4510)	,3,12, 13,17
					27250	F72T12/D35	15	12000	3500	70	4700 (4325)	,3,12, 13,17
					27256	F72T12/CW	15	12000	4200	60	4500 (3960)	,3,12, 13,17
					27259	F72T12/D	15	12000	6500	76	3800 (3345)	,3,12, 13,17
70	T12	84	82	Single Pin	28417	F84T12/CW	15	12000	4200	60	5300 (4665)	,3,12, 13,17
75	T12	96	94	Single Pin	23504	F96T12/WX	15	12000	3500	87	4200 (3695)	,3,12, 13,17
					29478	F96T12/CWX	15	12000	4100	87	4400 (3870)	,3,12, 13,17
					29833	F96T12/DSGN50	15	12000	5000	90	4400 (3870)	,3,12, 13,17
					29500	F96T12/DX	15	12000	6500	88	4360 (3835)	,3,12, 13,17

NOTES:

T5 Miniature Bipin (5/8" diameter)

T8 Medium Bipin (1" diameter)

PREHEAT FLUORESCENT LAMPS

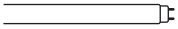
Miniature T5 Preheat Lamps (Starter Required)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Initial Lumens (Mean) at 25ºC/77ºF	Notes
4	T5	6	5.91	Mini Bipin	21364	F4T5/CW	25	6000	4200	60	135	,3,12, 13,17
6	T5	9	8.91	Mini Bipin	21365	F6T5/CW 25/CS	25	7500	4200	60	270	,3,12, 13,17
8	T5	12	11.91	Mini Bipin	20819	F8T5/SW/BL/1/6	6	7500	3000	52	400	,3,12, 13,17
					21367	F8T5/WW 25/CS	25	7500	3000	52	400	,3,12, 13,17
					21361	F8T5/CWX 25/CS	25	7500	4100	87	270	,3,12, 13,17
					21366	F8T5/CW 25/CS	25	7500	4200	60	390	,3,12, 13,17
13	T5	21	20.91	Mini Bipin	21369	F13T5/WW 25/CS	25	7500	3000	52	880	,3,12, 13,17
					21368	F13T5/CW	25	7500	4200	60	860	,3,12, 13,17
					21315	F13T5CW/BL/1/6	6	7500	4200	60	860	,3,12, 13,17
18	T5	30	29.91	Mini Bipin	20911	F18T5/WW/RS/SMBASE	24	7500	3000	52	1325	,3,12, 13,17
					20909	F18T5/CW/RS	24	6000	4200	62	1325	,3,12, 13,17

Standard T8 Preheat Lamps (Starter Required)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
13	T8	12	11.71	Med Bipin	21766	F13T8/CW	24	7500	4200	62	530 (460)	,3,12, 13,17
14	T8	15	14.78	Med Bipin	21486	F14T8/CW	24	7500	4200	60	685 (645)	,3,12, 13,17
					21488	F14T8/D	24	7500	6500	76	575 (560)	,3,12, 13,17
15	T8	18	17.78	Med Bipin	21610	F15T8/D830	24	7500	3000	82	920 (845)	,3,12, 13,17
					21701	F15T8/WW	24	7500	3000	52	845 (735)	,3,12, 13,17
					21609	F15T8/D35	24	7500	3500	70	940 (845)	,3,12, 13,17
					21616	F15T8/CW	24	7500	4200	60	825 (720)	,3,12, 13,17
					21600	F15T8/D	24	7500	6500	76	700 (655)	,3,12, 13,17

T8 Medium Bipin (1" diameter)



T12 Medium Bipin (1-1/2" diameter)

Standard T8 Preheat Lamps (Starter Required) (Cont.)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
18	T8	24	23.78	Med Bipin	23014	F18T8CW/K24	24	7500	4200	60	1190 (1035)	,3,12, 13,17
					23027	F18T8CW/K26	24	7500	4200	60	1280 (1080)	,3,12, 13,17
					23028	F18T8CW/K28	24	7500	4200	60	1360 (1130)	,3,12, 13,17
					23030	F18T8CW/K30	24	7500	4200	60	1400 (1200)	,3,12, 13,17

Standard T12 Preheat Lamps (Starter Required)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
14	T12	15	14.78	Med Bipin	21409	F14T12/CW	30	9000	4200	60	650 (565)	,3,12, 13,17
15	T12	18	17.98	Med Bipin	21542	F15T12/WW	30	9000	3000	52	770 (670)	,3,12, 13,17
					21532	F15T12/CW	30	9000	4200	60	750 (655)	,3,12, 13,17
20	T12	24	23.75	Med Bipin	22252	F20T12/DSW/RP	6	9000	3000	70	1300 (1170)	,3,12, 13,17
					22131	F20T12/WW	30	9000	3000	52	1250 (1090)	,3,12, 13,17
					22251	F20T12/D35	30	9000	3500	70	1300 (1170)	,3,12, 13,17
					22078	F20T12/CW	30	9000	4200	60	1200 (1045)	,3,12, 13,17
					22119	F20T12/DSGN50	30	9000	5000	90	880 (765)	,3,12, 13,17
					22083	F20T12/D	30	9000	6500	76	1075 (935)	,3,12, 13,17
25	T12	30	23.78	Med Bipin	22333	F25T12/WW/30	30	7500	3000	52	1750 (1525)	,3,12, 13,17
					22256	F20T12/DCW/RP	6	9000	4100	70	1300 (1170)	,3,12, 13,17
					22527	F25T12/CW/28	30	7500	4200	60	1670 (1455)	,3,12, 13,17
					22528	F25T12/CW/30	30	7500	4200	60	1730 (1505)	,3,12, 13,17
					22529	F25T12/CW/33	30	7500	4200	60	1850 (1655)	,3,12, 13,17

T8 Medium Bipin (1" diameter)

T12 Recessed Double Contact

T5 Miniature Bipin (5/8" diameter)

SPECIALTY FLUORESCENT LAMPS

SAFELINE® T8 Shatter Resistant Coated Lamps

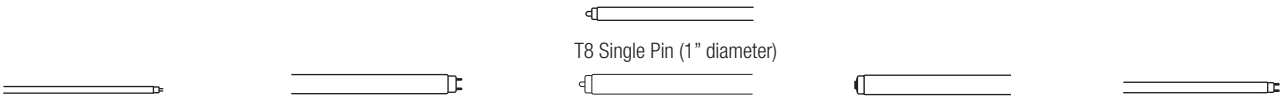
Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
17	T8	24	23.78	Med Bipin	22271	F017/835/XP/ECO/SL	30	24000	3500	85	1350 (1270)	,3,12, 13,17,19,28,29
25	T8	36	35.78	Med Bipin	22273	F025/835/XP/ECO/SL	30	24000	3500	85	2130 (2025)	,3,12, 13,17,19,28,29
28	T8	48	47.78	Med Bipin	22279	F028/835/XP/SS/ECO3/SL	30	24000	3500	85	2670 (2535)	,3,12, 13,17,19,28,29
					21948	F028/841/XP/SS/ECO3/SL	30	24000	4100	85	2670 (2535)	,3,12, 13,17,19,28,29
32	T8	48	47.78	Med Bipin	21678	F032/735/ECOSL	30	24000	3500	75	2715 (2445)	,3,12, 13,17,19,28,29
					21547	F032/741/ECO/SL	30	24000	4100	75	2715 (2445)	,3,12, 13,17,19,28,29
					22278	F032/841/XP/ECO3/SL	30	24000	4100	85	2940 (2790)	,3,12, 13,17,19,28,29
					22387	F032/841/XPS/ECO3/SL	30	24000	4100	85	3040 (2885)	,3,12, 13,17,19,28,29
					22142	F032/850/XP/ECO3/SL	30	24000	5000	85	2940 (2790)	,3,12, 13,17,19,28,29
					22389	F032/850/XPS/ECO3/SL	30	24000	5000	81	3040 (2885)	,3,12, 13,17,19,28,29
40	T8	60	59.61	Med Bipin	22281	F040/835/XP/ECO/SL	30	24000	3500	85	3675 (3455)	,3,12, 13,17,19,28,29

Weather-Shielded Jacketed Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
215	T12	96	93.91	Recessed Dbl Contact	21340	FJ96T12/CW/VHO/LT	8	10000	4200	60	15300 (10710)	,3,12,13, 17,22,32

SAFELINE T5 Shatter Resistant Coated Lamps

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	Avg Rated Life @ 12/hrs start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
21	T5	36	34	Mini Bipin	21027	FP21/835/ECO/SL	40	20000	24000	3500	85	1860 (1730)	,3,12,13, 14,17,24,28,29
28	T5	48	45.8	Mini Bipin	21034	FP28/835/ECO/SL	40	20000	24000	3500	85	2550 (2370)	,3,12,13, 14,17,24,28,29
50	T5	48	45.8	Mini Bipin	20051	FP54/50W/841/HO/SS/ECO/SL	40	30000	40000	4100	85	4850 (4510)	,3,12,13, 14,17,24,28,29
					20052	FP54/50W/850/HO/SS/ECO/SL	40	30000	40000	5000	82	4850 (4510)	,3,12,13, 14,17,24,28,29



SAFELINE T5 Shatter Resistant Coated Lamps (Cont.)

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	Avg Rated Life @ 12/hrs start (hrs)	CCT (K)	CRI	Lumens Initial (Mean) at 25ºC/77ºF	Notes
54	T5	48	45.8	Mini Bipin	21020	FP54/835/HO/SL/ECO	40	30000	40000	3500	85	4850 (4510)	,3,12,13, 14,17,24,28,29
					21021	FP54/841/HO/SL/ECO	40	30000	40000	4100	85	4850 (4510)	,3,12,13, 14,17,24,28,29
					21022	FP54/850/HO/SL/ECO	40	30000	40000	5000	85	4755 (4420)	,3,12,13, 14,17,24,28,29

SAFELINE T12 Shatter Resistant Coated Lamps

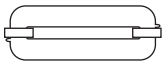
Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life @ 3hrs/start (hrs)	CCT (K)	CRI	Initial Mean Lumens at 25ºC/77ºF	Notes
34	T12	48		Med Bipin	24396	F34CW/SS/SL (F40CW/SS/SL)	30	20000	4200	60	2600	,1,3,12, 13,17,28,29
60	T12	96		Single Pin	29555	F96T12/CW/SS/SL	15	12000	4200	60	5140	,1,3,12, 13,17,28,29
85	T12	72		Recessed Dbl Contact	25283	F72T12/D835/HO/SL	15	12000	3500	80	6620	,1,3,12, 13,17,28,29

GRO-LUX T8 Lamps for Plant Growth and Aquariums

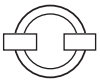
Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	Initial Mean Lumens at 25ºC/77ºF	Notes
17	T8	24	23.78	Med Bipin	22368	FO17/GRO/AQ/ECO/2/24	24	24000		,3,12, 13,21
32	T8	48	47.78	Single Pin	22362	FO32/GRO/AQ/ECO/2/30	30	24000		,3,12, 13,21

GRO-LUX T12 Lamps for Plant Growth and Aquariums

Nominal Wattage	Bulb Shape	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	Initial Mean Lumens at 25ºC/77ºF	Notes
20	T12	24	23.78	Med Bipin	22029	F20T12/GRO/AQ/RP	6	9000	480	,3,12, 13,21
					22013	F20T12/GRO/AQ/WS/RP	6	9000	750	,3,12, 13,21
40	T12	48	47.78	Med Bipin	24660	F40/GRO/AQ/RP	6	20000	1200	,3,12, 13,21
					24671	F40/GRO/AQ/WS/RP	6	20000	1700	,3,12, 13,21



Racetrack

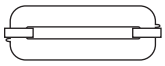


Circular

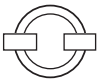
SPECIALTY FLUORESCENT LAMPS

ICETRON® Inductiveley Coupled Electrodeless Lamps

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF	Notes
40	T17 Racetrack	7.54	Mount Brkts	26310	ICE40/835/RCT/2P	1	100000	3500	80	3000 (1970)	3,12,13, 14,18,30,31
				26312	ICE40/841/RCT/2P	1	100000	4100	80	3000 (1970)	3,12,13, 14,18,30,31
				26314	ICE40/850/RCT/2P	1	100000	5000	80	2925 (1925)	3,12,13, 14,18,30,31
40	T17 Circular	6.96	Mount Brkts	26311	ICE40/835/CIR/2P	1	100000	3500	80	3000 (1970)	3,12,13, 14,18,30,31
				26313	ICE40/841/CIR/2P	1	100000	4100	80	3000 (1970)	3,12,13, 14,18,30,31
				26315	ICE40/850/CIR/2P	1	100000	5000	80	2925 (1925)	3,12,13, 14,18,30,31
70	T17 Racetrack	12.4	Mount Brkts	26087	ICE70/835/2P/ECO	1	100000	3500	80	6815 (5645)	,,3,4,12, 13,14,18,30,31
				26088	ICE70/841/2P/ECO	1	100000	4100	80	6815 (5645)	,,3,4,12, 13,14,18,30,31
				26089	ICE70/850/2P/ECO	1	100000	5000	80	6655 (5515)	,,3,4,12, 13,14,18,30,31
100	T17 Racetrack	12.4	Mount Brkts	26102	ICE100/835/2P/ECO	1	100000	3500	80	8600 (7125)	,,3,4,12, 13,14,18,30,31
				26103	ICE100/841/2P/ECO	1	100000	4100	80	8600 (7125)	,,3,4,12, 13,14,18,30,31
				26105	ICE100/850/2P/ECO	1	100000	5000	80	8300 (6880)	,,3,4,12, 13,14,18,30,31
150	T17 Racetrack	16.34	Mount Brkts	26152	ICE150/835/2P/ECO	1	100000	3500	80	13000 (10775)	,,3,4,12, 13,14,18,30,31
				26153	ICE150/841/2P/ECO	1	100000	4100	80	13000 (10775)	,,3,4,12, 13,14,18,30,31
				26155	ICE150/850/2P/ECO	1	100000	5000	80	12700 (10525)	,,3,4,12, 13,14,18,30,31
200	T17 Racetrack	16.34	Mount Brkts	26893	ICE200/835/RCT/2P/ECO	1	100000	3500	80	15900 (11135)	,★,,3,4, 12,13,14,18,30,31
				26895	ICE200/841/RCT/2P/ECO	1	100000	4100	80	15900 (11135)	,★,,3,4, 12,13,14,18,30,31
				26897	ICE200/850/RCT/2P/ECO	1	100000	5000	80	15600 (10925)	,★,,3,4, 12,13,14,18,30,31
200	T18 Circular	14.17	Mount Brkts	26894	ICE200/835/CIR/2P/ECO	1	100000	3500	80	15885 (11125)	,★,,3,4, 12,13,14,18,30,31
				26896	ICE200/841/CIR/2P/ECO	1	100000	4100	80	15885 (11125)	,★,,3,4, 12,13,14,18,30,31
				26898	ICE200/850/CIR/2P/ECO	1	100000	5000	80	15500 (10855)	,★,,3,4, 12,13,14,18,30,31



Racetrack



Circular

ICETRON Electronic Ballasts

Product Number	Ordering Abbreviation	Pkg Qty	Input Current (A)	Lamp Type	Rated Lamp Lumens	Ballast Factor	System Lumens	Input Power	System LPW
49758	QT 1X40ICEUNVT	5	0.36/0.16	ICE40	3000	1.00	3000	48/47	63/64
49753	QT 1X100ICE/UNV-T	5	0.66/0.29	ICE70	6815	1.05	7155	79/77	90/92
49756	QT 1X100 ICE/UNV-W	5	0.66/0.30	ICE70	6815	1.05	7155	79/77	90/92
49753	QT 1X100ICE/UNV-T	5	0.88/0.37	ICE100	8600	1.00	8600	106/103	81/83
49756	QT 1X100 ICE/UNV-W	5	0.88/0.37	ICE100	8600	1.00	8600	106/103	81/83
49759	QT 1X100ICE/UNV-T DIM	5	0.88/0.37	ICE100	8600	1.00	8600	106/103	81/83
49772	QT 1X150ICE/UNV-T	5	1.28/0.54	ICE100	8600	1.38	11900	154/149	77/80
49773	QT 1X150 ICE/UNV-W	5	1.28/0.54	ICE100	8600	1.38	11900	154/149	77/80
49772	QT 1X150ICE/UNV-T	5	1.34/0.58	ICE150	13000	1.00	13000	161/156	81/83
49773	QT 1X150 ICE/UNV-W	5	1.34/0.58	ICE150	13000	1.00	13000	161/156	81/84
49789	QT 1X200ICE/UNV-T	5	1.80/0.75	ICE200	15900	1.00	15900	215/20	84/76

ENDURA Electronic Ballasts (120-240V)[1]

Product Number	Ordering Abbreviation	Pkg Qty	Input Current (A)	Lamp Type	Rated Lamp Lumens	Ballast Factor	System Lumens	Input Power	System LPW
49761	QTENDURA70100120240S	5	0.88/0.44	EN100	8600	1.00	8600	106/103	81/84
49781	QTENDURA1001501202405	5	1.34/0.66	EN150	13000	1.00	13000	161/156	81/83

ENDURA Inductively Coupled Electrodeless Lamps (240V)[1]

Nominal Wattage	Bulb Shape	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Average Rated Life (hrs)	CCT	CRI	Approx. Lumens Initial (Mean) at 25ºC/77ºF
70	T17 Racetrack	12.4	Mount Brkts	26090	EN70830 1/CS 1/SKU	1	100000	3000	80	6815 (5645)
100	T17 Racetrack	12.4	Mount Brkts	26507	EN100840 1/CS 1/SKU	1	100000	4000	80	8600 (7125)
150	T17 Racetrack	16.34	Mount Brkts	26274	EN150840 1/CS 1/CS	1	100000	40000	80	13000 (10775)

[1] ENDURA Brand is to be sold for end use outside of NAFTA.

FLUORESCENT COMPETITIVE GUIDES

NOTE: These tables are intended only as guides and may represent another lamp company's most similar product or product family rather than an identical match. Individual manufacturer's performance values should be consulted. Environmental conditions, ballast type and other auxiliary equipment may affect lamp performance.

FLUORESCENT BRAND NAMES

SYLVANIA	GE*	PHILIPS**
CURVALUME® (FB)	MOD-U-LINE	U-Bent (FB)
CWX		Home Light Everywhere (HL Everywhere)
DESIGN 50® (DSGN50)	Chroma 50 (C50)	Colortone 50 (C50)
DESIGNER® Series	Specification Series (SP)	SPEC or TL700
DESIGNER 800 Series	Specification Series (SPX)	Ultralume or TL800
DESIGNER Cool White	SP41	Home Light Cool (HL Cool)
DESIGNER Cool White PLUS	SPX41	41U
DESIGNER Warm White	Kitchen and Bath ULTRA (70 CRI)	SPEC30
DESIGNER Warm White PLUS (DWWP)	Kitchen and Bath ULTRA (80 CRI)	Home Light WX (HL WX)
DESIGNER 700, 3500K (D35)	SP35	Home Light Warm (HL Warm)
ECOLOGIC® (ECO®)	Ecolux (ECO)	ALTO
GRO-LUX®	Gro & Sho/Plant & Aquarium/Terrarium	Agro-Lite (AGRO)
ICETRON®	–	–
OCTRON®	T8 (was Trimline)	TL70/TL80
OCTRON 700 XP® ECO	SP Ecolux XL T8 Lamps with Starcoat	TL700 PLUS ALTO
OCTRON 800 XP ECO	SPX Ecolux XL T8 Lamps with Starcoat	TL800 PLUS ALTO
OCTRON 800 XPS ECO	SPX Ecolux XL HL T8 Lamps with Starcoat	–
OCTRON 950	–	TL950
PENTRON®	T5 Starcoat	SILHOUETTE™
SAFELINE®	covRguard	–
SUN STICK®	SUN (Sunshine)	C50
SUPERSAVER® (SS)	Watt-Miser (WM)	Econ-o-Watt (EW)
HO (800mA)	HO (800mA)	HO (800mA)
VHO (1500mA)	1500 (1500mA) & Power Grove	VHO (1500mA) (was SHO)
VHO/LT	T10/1500MA	VHO-0
XP®	XL	Plus
XP/XL	SXL	XLL
XP/XL/SS	SXL	EW/LL
XPS®	–	Advantage

* Trademarks or registered trademarks of General Electric Company ** Trademarks or registered trademarks of Philips

FLUORESCENT COLOR CROSS REFERENCE

SYLVANIA	GE	PHILIPS	SYLVANIA	GE	PHILIPS
CW	CW	CW	D41	SP41	Spec 41
CWX	–	CWX, HL Everywhere	–	SP65	–
D	D	D	D830	SPX30	30U
DX	DX	DX	D835	SPX35	35U
DSGN50	C50	50	D841	SPX41	41U
DSGN50	SGN	C50	D865	–	–
DCW, D41	SP41	HL Cool	730	SP30	730
DCWP	SPX41	U41	735	SP35	735
DWW, D30	KB / 70 CRI, SP30	SPEC30	741	SP41	741
DWWP, D830	KB / 82 CRI, SPX30	HL WX	750	SP50	750
D35	SP35	HL Warm	765	SP65	–
GRO/AQ	–	AGRO	827	SPX27	27
GRO/WS/AQ	PL/AQ	–	830	SPX30	30, 830
N	N	N	841	SPX41	41, 841
SUN STICK	SUN	C50	850	SPX50	50, 850
WW	WW	WW	865	SPX65	865
D30	SP30	Spec 30	950	–	950
D35	SP35	Spec 35	–	–	–

FLUORESCENT ELECTRICAL INTERCHANGEABILITY

SYLVANIA	GE	PHILIPS
Linear Lamps		
F18T8/CW/K/23	F24"T8/CW/4	F15T8/CW/24
F18T8/CW/K/26	F26"T8/CW/4	F16T8/CW/26
F18T8/CW/K/28	F28"T8/CW/4	F17T8/CW/28
F18T8/CW/K/30	F30"T8/CW/4	F18T8/CW/30
F34CW/SS	F34CW/WM	F34CW/EW
Formerly known as F40CW/SS	F40CW/WM	F40CW/EW
F96T12/CW/SS	F96T12/CW/WM	F96T12/CW/EW
FB40/D41/6	F40/SP41/U/6	FB40/SPEC41/6
FB40/CW/6/SS (new FB34/CW/6/SS)	F40CW/U/6/WM (new F34CW/U/6/WM)	FB40/CW/6/EW (new F34/CW/6/EW)
OCTRON®	T8 (was Trimline)	TL70/TL80
OCTRON 700 Series	T8 SP	TL70
OCTRON 800 Series	T8 SPX	TL80
FO17…	F17T8/SP(or SPX)…	F17T8/TL…
FO25…	F25T8/SP(or SPX)…	F25T8/TL…
FO32…	F32T8/SP(or SPX)…	F32T8/TL…
FO32/…XP®	F32T8/XL/SP (or SPX)	F32T8/TL…PLUS
FO32/8…XP/XL	F32T8/SXL	F32T8/XLL
FO32/8…XP/XL/SS	–	F32T8/EW/LL
FO32/…/XPS®/ECO®	–	F32T8/ADV
FO30…XP/SS/ECO	F32T8/SP…/IS/WM/ECO	F32T8/ADV8…/EW
FO28/8…XP/SS/ECO	–	–
FO32/25W/8…XP/SS/ECO	–	F32T8/ADV8…/XEW/ALTO
FO40…	F40T8/SP…(or SPX)	F40T8/TL
FO72…	–	–
FO96…	F96T8/SP…(or SPX)	F96T8/TL…
FO96/7…XP/ECO	F96T8/XL.SP…	–
FO96/8…XP/ECO	F96T8/XL/SPX…	–
FO96/8…XP/SS/ECO	F96T8/SP…/WM	–
–	–	F48T8/TL…/HO
–	–	F60T8/TL…/HO
–	–	F72T8/TL…/HO
FO96…/HO/ECO	F96T8/SP (or SPX)…/HO	F96T8/TL…/HO
–	F25T12/SP…(for T8 electronic ballasts)	–
FBO16…	–	–
FBO24…	–	–
FBO27	–	–
FBO28	–	–
FBO29/8…XP/SS/ECO	–	FB29T8/TL8…/EW/ALTO
FB03018...XP/6/SS	F32T8/SPX...U6/WM/ECO	–
FBO31…	F31T8/SPX…/U	FB31T8/TL8…/ALTO
FBO31…XP	–	–
FBO32…	F32T8/SP(or SPX)…/U6	FB32T8/TL…/6
FBO32…XP	–	–
FBO31/…XPS/ECO	–	–
FBO32/…XPS/ECO	–	–
FBO32/8…XP/SS/ECO	–	–
FP14/8…	F14/T5/8…	F14T5/8...
FP21/8…	F21/T5/8…	F21T5/8…
FP28/8…	F28/T5/8…	F28T5/8…
FP35/8…	F35/T5/8…	F35T5/8…
FP24/8…/HO	F24/T5/8…/HO	F24T5/8…/HO
FP39/8…/HO	F39/T5/8…/HO	F39T5/8…/HO
FP54/8../HO	F54/T5/8../HO	F54T5/8…/HO
FP80/8…/HO	F80/T5/8…/HO	F80T5/8…/HO
–	F40T17/CW/IS	–
–	F96T17/…	–
HO (800mA)	HO (800mA)	HO (800mA)
F96T12/…/HO/COLDTEMP	F96T12/…/HO/CT	F96T12/…/HO-0
VHO (1500mA)	1500 or PG17 (both 1500mA)	VHO (1500mA)
VHO/LT (1500mA)	T10, 1500-0 (both1500mA)	VHO-0 (1500mA)

FLUORESCENT LAMP COLORS

COLOR	COLOR ABBREVIATION	CORRELATED COLOR TEMPERATURE	COLOR RENDERING INDEX
OCTRON® "800" 2700K	827	2700	85
OCTRON XP® "800" 2700K	827	2700	85
WARM WHITE DELUXE	WWX	2900	82
WARM WHITE	WW	3000	52
WARM WHITE PLUS	WWP	3000	70
DESIGNER® 3000K	D30	3000	70
DESIGNER WARM WHITE	DWW	3000	70
DESIGNER "800" 3000K	D830	3000	80
DESIGNER WARM WHITE PLUS	DWWP	3000	80
OCTRON "700" 3000K	730	3000	75
OCTRON XP "700" 3000K	730	3000	78
OCTRON "800" 3000K	830	3000	82
OCTRON XP "800" 3000K	830	3000	85
OCTRON XPS® "800" 3000K	830	3000	85
PENTRON® 3000K	830	3000	85
GRO-LUX®Aquarium WIDE SPECTRUM	GRO/AQ/WS	3400	89
WHITE	W	3450	57
DESIGNER 3500K	D35	3500	70
DESIGNER "800" 3500K	D835	3500	80
ICETRON® 3500K	835	3500	80
PENTRON® 3500K	835	3500	85
OCTRON "700" 3500K	735	3500	75
OCTRON XP "700" 3500K	735	3500	78
OCTRON "800" 3500K	835	3500	82
OCTRON XP "800" 3500K	835	3500	85
OCTRON XPS "800" 3500K	835	3500	86
NATURAL WHITE	N	3600	86
DESIGNER 4100K	D41	4100	70
DESIGNER COOL WHITE	DCW	4100	70
DESIGNER "800" 4100K	D841	4100	80
DESIGNER COOL WHITE PLUS	DCWP	4100	80
ICETRON 4100K	841	4100	80
OCTRON "700" 4100K	741	4100	75
OCTRON XP "700" 4100K	741	4100	78
OCTRON "800" 4100K	841	4100	82
OCTRON XP "800" 4100K	841	4100	85
OCTRON XPS "800" 4100K	841	4100	86
PENTRON 4100K	841	4100	85
COOL WHITE DELUXE	CWX	4100	87
COOL WHITE	CW	4200	60
COOL WHITE PLUS	CWP	4100	70
ICETRON 5000K	850	5000	80
OCTRON "700" 5000K	750	5000	75
OCTRON "800" 5000K	850	5000	80
OCTRON XP "800" 5000K	850	5000	85
OCTRON "900" 5000K	950	5000	90
PENTRON 5000K	580	5000	85
DESIGN 50®	DSGN50	5000	90
DAYLIGHT FULL SPECTRUM	DAYLIGHTFULL SPECTRUM	5000	90
DAYLIGHT®	DAYLIGHT	6500	76
DAYLIGHT 6500	DAYLIGHT6500V	6500	80
OCTRON "700" 6500K	765	6500	75
OCTRON XP "800" 6500K	865	6500	85
PENTRON 6500K	865	6500	85
DESIGNER 6500K	865	6500	80
DAYLIGHT DELUXE	DX	6500	88
OCTRON SKYWHITE	SKYWHITE	8000	88

For a more complete manufacturers' cross reference, please see that section of this catalog or visit the electronic catalog at www.sylvania.com.

NOTES FOR FLUORESCENT LAMPS

Symbol	Description
✹	New item introduced within the past year.
Ⓔ	At time of printing, markings are in accordance with EPAct 1992 rules.
	This ECOLOGIC® lamp was designed to pass the Federal TCLP criteria for classification as non-hazardous waste in most states. Disposal regulations may vary; check local and state regulations.
	Lead-Free Glass.
★	New item.

Footnote	Description
1	May be operated at 100 watts (1000MA) same as F84T12/HO.
2	Due to their small diameter, T2 miniature fluorescent lamps operate at higher surface temperatures than other fluorescent lamps. To avoid possible burns, do not touch the lamp during operation and allow sufficient cooling time before removing the lamp from the fixture. The typical bulb wall temperature during operation is 120ºC at the ends. The maximum allowable bulb wall temperature is 150ºC. To avoid electrical shock, turn electrical power off before removing or installing the lamp.
3	Mean lumens are measured at 40% of average rated lamp life.
4	The /2P version of the ICETRON® lamp is supplied with a 24-inch lead wire terminated by a 2-Pin connector rather than the old 12-inch lead, 3-Pin connector design. The /2P versions are powered by QT1X100 ICE/UNV-T or QT1X150 ICE/UNV-T ballasts.
5	Recommended to be used on any F96 T8 Instant Start circuit. It is not recommended to be used: (1) at lamp ambient temperatures below 60ºF or in drafty locations, (2) on low power factor ballast, or (3) inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with the OCTRON® FO96 SUPERSAVER® 55 watt T8 lamp. Any of the above situations could result in lamp starting and stabilization problems.
6	SUPERSAVER® lamps are recommended to be used on F32T8 ballasts with minimum open circuit voltage of 550V RMS at the lamp. Not recommended to be used: (1) in remotely ballasted fixtures with lamp open circuit voltages below 550V, (2) with Rapid Start ballasts unless the lamp open circuit voltage is greater than 570V, (3) in air handling fixtures, (4) on low power factor ballasts or (5) inverter operated emergency lighting systems unless the equipment is specifically listed for particular lamps. Any of the above situations could result in lamp starting and stabilization problems, or system compatibility issues. If an operating lamp is exposed to drafts or the ambient temperature falls below 60ºF (70ºF for 25W), striation (a rhythmic pulsing pattern of light running down the tube) and/or reduction in lamp brightness may occur. While visually disconcerting, neither behavior is damaging to the lamp and removing the cause (draft or temperature) will return the lamp to normal operation.
7	Recommended only for use on 2-lamp, 30 watt rapid-start high power factor lead, indoor ballasts that meet ANSI standards. Not intended for use: (1) at lamp ambient temperatures below 60ºF or in drafty locations, (2) on low power factor ballasts, (3) reduced current/reduced light output ballasts, (4) dimming ballasts or (5) on inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with 25 watt lamps.
8	Recommended for use on one or two lamp 40 watt rapid start, high power factor, lead, indoor ballasts that meet ANSI standards. Not intended for use: (1) at lamp ambient temperatures below 60ºF or in drafty locations, (2) on low power factor ballasts, (3) reduced current/reduced light output ballasts, (4) dimming ballasts or (5) on inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with 34 watt lamps.
9	Recommended for use on one or two lamp high power factor, lead, instant-start, indoor ballasts that meet ANSI standards. Not intended for use: (1) at lamp ambient temperatures below 60ºF or in drafty locations, (2) on low power factor ballasts, (3) reduced current/reduced light output ballasts, (4) dimming ballasts or (5) on inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with 32 watt or 60 watt lamps.
10	Recommended for use on one or two lamp high power factor, lead 8-foot lamp, high output, indoor ballasts that meet ANSI standards. Not intended for use: (1) at lamp ambient temperatures below 60ºF or in drafty locations, (2) on low power factor ballasts, (3) reduced current/reduced light output ballasts, (4) dimming ballasts or (5) on inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with 95 watt lamps.
11	Recommended for use on 2-lamp high power factor, lead, 8-foot lamp, very high output, indoor ballasts that meet ANSI standards. Not intended for use: (1) at lamp ambient temperatures below 60ºF or in drafty locations, (2) on low power factor ballasts, (3) reduced current/reduced light output ballasts, (4) dimming ballasts or (5) on inverter operated emergency lighting systems unless equipment is specifically listed for use with 195 watt lamps.
12	Approximate initial lumens after 100 hours operation.
13	The life ratings of fluorescent lamps are based on 3 hour operating cycles under specified conditions and with ballast meeting ANSI specifications. If operating cycle is increased, there will be a corresponding increase in the average hours life.

NOTES FOR FLUORESCENT LAMPS (CONT.)

Footnote	Description
14	Lumen output and life rated on high frequency operation.
15	Rating for OSRAM SYLVANIA Circline lamps are based on operation in Rapid Start circuits. They will also operate on preheat circuits.
16	Gold OCTRON® lamp has plastic tube guard which filters wavelengths less than 525nm and provides shatter protection.
17	Minimum starting temperature is a function of the ballast; consult the ballast manufacturer.
18	Amalgum tip temperature for 90% light output for 70W, 150W, 200W types is 130-260 degrees (symbol) F (55-125C), 104-199F (40-93C) for the 40W types and 122-260F for the 100W types.
19	OCTRON lamps should be operated only with magnetic rapid start ballasts designed to operate 265 mA, T8 lamps or high frequency (electronic) ballasts that are either instant start, or rapid start, or programmed rapid start specifically designed to operate T8 lamps. OCTRON lamps may be operated on instant start ballasts with ballast factors ranging from a minimum of 0.71 to a maximum of 1.20 at the nominal ballast input voltage. When OCTRON lamps are operated in the instant start mode, the two wires or two contacts of each socket should be connected to each other. They should then be connected to the appropriate ballast lead wire using National Electric Code techniques.
20	Approximate length of OCTRON CURVALUME® lamps is measured from base face to outside of glass bend.
21	Preheat lamp, starter required.
22	Low temperature performance rated at 35ºF ambient.
23	40W Rapid Start Lamps may be used in starter operated fixtures designed for 40W preheat lamps. Life rating for preheat service is approximately 15,000 hours average.
24	There is a NEMA supported, industry issue where T2, T4 and T5 fluorescent and compact fluorescent lamps operated on high frequency ballasts may experience an abnormal end-of-life phenomenon. This end-of-life phenomenon can result in one or both of the following: (1) Bulb wall cracking near the lamp base or (2) The lamp can overheat in the base area and possibly melt the base and socket. NEMA recommends that high frequency compact fluorescent ballasts have an end-of-life failure mode described above. For additional information refer to NEMA papers on their website at www.NEMA.org.
25	Labeled for cold temperature (below 60ºF) operation only per EPAct.
26	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 2 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.75 meters (30 inches) should be limited; for example exposure at 0.55m (22 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
27	Recommended to be used on any F32 T8 Instant Start circuit. It is not recommended to be used: (1) with Rapid Start circuits unless the open circuit voltage is greater than 550V, (2) at lamp ambient temperatures below 60ºF or in drafty locations, (3) on dimming ballast or (4) inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with the OCTRON® SUPERSAVER® 27, 28, 29 or 30 watt U-bent T8 lamp. Any of the above situations could result in lamp starting and stabilization problems.
28	SAFELINE lamps satisfy the criteria of having a non-shattering covering for prevention of glass and other lamp components in your product by containment within the safety coating material. The covering must be intact or the lamp must be replaced to be in compliance. An onsite inspector will require correction if the lamps are installed improperly or not maintained properly.
29	SAFELINE lamps are intended for indoor use only. Lamps must be used in ambient temperatures below 135ºF. The coating is designed to withstand constant operating temperatures up to 239ºF and has a melting point in excess of 500ºF. Lamps must be used with sockets that provide adequate lamp pin to socket contact. Lamps must not be used with defective ballasts sockets or fixtures with improper wiring.
30	ICETRON® Inductively Coupled Electrodeless Fluorescent lamp. Read these warnings and instructions before installing and using this lamp. (1) This lamp operates at a higher temperature (130ºC) than standard fluorescent lamps. To avoid the possibility of minor skin burns, do not touch lamp or metal mounting brackets during operation and allow sufficient cooling time prior to servicing, handling or replacing lamp. (2) This lamp generates electric and magnetic fields during operation. The electric and magnetic fields generated by this lamp during operation in typical lighting applications do not pose exposure risks relative to the limits documented in ANSI C95.1. (3) To prevent electric shock, shut off the main power to the fixture and allow at least two minutes for ballast voltage to discharge before attempting to service or replace lamp. (4) To obtain optimum safety and system performance, use only with OSRAM SYLVANIA ballast. (5) To avoid potential electric shock hazard, do not use lamp if wires or insulation are cut or pulled out of connector.

Footnote	Description
31	ICETRON® Inductively Coupled Electrodeless Fluorescent lamp. Read these warnings and instructions before installing and using this lamp. Instructions for Installation and Use. (1) To avoid premature lamp or ballast failure and ensure proper lamp, ballast and system performance, make sure lamp, ballast and fixture are properly installed. Electrical interconnects, electrical grounds, thermal management and heatsinking specifications and requirements must be fully adhered to in all applications. (See OSRAM SYLVANIA ICETRON® DESIGN GUIDE.) (2) Do not alter the electrical connector on lamp and/or ballast. To do so may adversely affect lamp operation, ballast life and/or emission of EMI (electromagnetic interference). (3) This product may cause interference with radios, cordless telephones and remote control devices. If interference occurs, relocate the radios, cordless telephones and/or remote control devices away from this product.
32	A fluorescent jacketed lamp consists of a T12 (1-1/2" diameter) lamp enclosed inside a T14.5 (1-13/16" diameter) glass jacket. A jacketed fluorescent lamp operates efficiently over a wide range of climatic conditions, including extremes of cold and strong wind in which an unjacketed (bare) lamp would be inefficient or inoperable. The jacket size provides the clearance necessary to minimize damaging lamp-jacket contact; narrow bans of rubber placed between the lamp and the jacket further prevent contact. A weather-tight seal is formed by neoprene rubber end caps.
33	Use only with electronic ballasts which have been specifically designed to operate T2 miniature fluorescent lamps and to reliably and safely control all lamp operating modes including end-of-lamp-life sensing circuitry. If a non-conforming ballast is used, very high temperatures (350ºC typical) may be generated at the ends of the lamp especially during end-of-lamp-life operation, causing the lamp to crack and resulting in potential fire, electrical shock or burn hazards.
34	Amalgam T5 fluorescent lamps provide at least 90% light output from 10-70ºC (50-158ºF). Non-amalgam lamps provide 90% light output from 25-50ºC (77-122ºF).
35	Lamps are OSRAM branded.
36	Lamp will no longer be produced after July 14, 2012 due to 2009 DOE Rule Making for GSFL.

NOTES:

HID

Table of Contents

OSRAM SYLVANIA: THE LEADER IN ENERGY-SAVING HID LAMPS

UNDERSTANDING HIGH INTENSITY DISCHARGE LIGHTING

A brief description of the catalog format and related terminology will assist the reader in understanding the information presented in this section.

All product families are listed in ascending wattage, followed by alphabetical bulb designation to simplify lamp identification. Performance ratings are based on tests conducted under controlled conditions on AC circuits with auxiliary equipment meeting current published ANSI specifications.

Lamp performance under typical service conditions may vary from rated values. Ratings and specifications are subject to change without notice.

ANSI CODE

This is a unique code that describes the class and the electrical characteristics of the lamp and ballast as well as the fixture requirements. The code is developed and assigned by the American National Standards Institute (ANSI). It is intended to aid in matching the lamp to both the correct ballast and to a luminaire with the required features. The ANSI CODE consists of type of lamp (S = HPS, H = Mercury, M = Metal Halide, L = LPS, C = Ceramic Metal Halide), followed by the ballast number, and for metal halide and Ceramic metal halide lamps followed by the fixture requirement (O, E, S, F).

The emergence of electronic ballasts to operate metal halide lamps has produced additional need to separate the lamp designation of quartz and ceramic metal halide lamps, as there can be some important differences in system performance. Therefore the C lamp designation from NEMA has been introduced going forward for future differentiation of ceramic metal halide lamps and they will begin to be labeled accordingly.

ARC LENGTH

Arc length is the dimension of the arc discharge measured from one electrode tip to the other. This is useful for optical design of reflectors and affects fixture efficiency.

AVERAGE RATE LIFE (HOURS)

The average life of a lamp is based on vertical operation (unless otherwise noted) of representative lamps operated under controlled conditions of at least 10 hours per start (except for M1500 and BRITELINE® lamps, which are based on 5 hours per start). Average life is defined as the total operation hours at which 50% (Median) of any group of lamps is still operating (except for most High Pressure Sodium and Mercury lamps, for which 65% of the lamps are operating at the end of life denoted by a "+" next to the life rating). Variations in operating conditions such as bulb and base temperatures and line voltage can also affect lamp life.

Regular operation of lamps with off times less than the hot restrike time will shorten lamp life. For hot restrike values of specific lamp types, please refer to the SYLVANIA Metal Halide Lamp Specification Guide.

Operating cycles shorter than 10 hours per start will reduce lamp life as follows:

5 hours / start – Approximately 75% of rating

2.5 hours / start – Approximately 55% of rating

1.25 hours / start – Approximately 40% of rating

BASE

Most SYLVANIA HID lamp bases for general lighting are made of corrosion-resistant brass with special lubricant to provide easy removal at end of lamp life. See page 123 for all base illustrations.

GU6.5 – Bipin bases are used on the smallest HID lamps and convenient twist & lock feature provides secure installation.

G8.5 – Durable bipin bases have special center presses that secure lamps in the socket.

G12 – Ceramic bipin bases are used on T6, T7.5 single ended lamps.

E26 Medium – Medium (MED) bases are used on lamps in E17 bulbs and are limited to 175W maximum.

E26 Medium Skirted – Medium skirted (Med Skt) bases consist of a medium brass base with a skirt, which is mechanically connected to a PAR38 bulb.

E39 Mogul – All (MOG) bases are embossed with letters and numbers representing months and years. The date of installation can be recorded by marking the letter of the current month and the number that coincides with the last digit of the current year.

EX39 Exclusionary Mogul Base – Exclusionary Mogul bases (EXCL MOG) are bases used on metal halide lamps having shrouded arc tubes, permitting them to be used in open fixture applications. These bases are compatible with exclusionary or standard mogul sockets.

E39 POM – Position Oriented Mogul (POM) bases are used on lamps designed to operate only in the horizontal position and require a special POM socket. A pin located on the base engages in a slot within the POM socket ensuring proper operating position of the lamp within the fixture.

Rx7s / R7s Recessed Single Contact – SYLVANIA double-ended HID lamps with recessed single contact (RSC) bases have silver plated contacts to provide maximum electrical contact.

BULB

Each bulb description consists of a letter to indicate bulb shape, followed by numbers that indicate maximum bulb diameter in 1/8 inch increments. For example, a BT37 bulb is a blown shape with a tubular top, 3-7/8 of an inch or 4-5/8 inches in diameter. Illustrations of bulb shapes are shown on page 123.

Although SYLVANIA HID bulbs are made of glass designed to resist thermal shock in normal applications, they must be shielded from direct contact with liquids, such as rain, during operation to avoid bulb breakage.

COLOR RENDERING INDEX (CRI)

Color Rendering Index (CRI) is an international scale (numbering system) up to 100 indicating the relative color rendering quality of a light source when compared to a standard reference light source of the same chromaticity (color temperature). The CRI expresses the degree to which colors will appear "familiar" or "natural" under the light source selected. In general, the higher the CRI number, the better the color rendering properties of the light source being measured. The color rendering index of any two like sources should only be compared if those sources have the same correlated color temperature (CCT).

CORRELATED COLOR TEMPERATURE (CCT)

The correlated color temperature of a light source, expressed in Kelvin (K), is a means of describing the appearance or chromaticity of the source. The correlated color temperature of the light source contributes to the visual appearance of the lighted space. "Warm" light sources have a low color temperature (2000-3000K) and feature more light in the red/orange/yellow range. Light with a higher color temperature (>4000K) features more blue and is referred to as "cool".

With new installations, or group relamps, all color performance evaluations should be made after at least 100 hours of operation (at recommended operating cycles) to allow the lamps to stabilize. Additional changes in chemistry within the arc tube over the life of the lamp may also cause the color temperature to shift as the lamp gets closer to the end of it's rated life. To minimize color variation within an installation, it is recommended that HID lamps be group relamped and run on equal operating cycles.

DIMMING HID

Most SYLVANIA HID products can be dimmed on stepped 0- 10 volts, bi-level dimming systems provided specific guidelines are followed. Generally, most Metalarc® metal halide lamps can be dimmed down to 50% of rated wattage depending on the lamp type and operating position. LUMALUX® high pressure sodium lamps can also be dimmed down to 50% of rated wattage. In addition to lower light output, HID lamps may shift in overall color and exhibit a lower color rendering index (CRI) when operated in a dimmed mode. Some restrictions apply to both the operation of the ballast and lamp. For more information on dimming, please reference NEMA guidelines or contact a SYLVANIA representative.

FIXTURE REQUIREMENT

Developed by the American National Standard Institute (ANSI), the fixture requirement code describes the type of fixture required for each lamp type. See lamp warnings for additional information and proper operating instructions.

Operating cycles shorter than 10 hours per start will reduce lamp life as follows:

E = Lamps classified as E-type are to be used only in suitably rated enclosed luminaires.

O = Lamps classified as O-type, comply with ANSI Standard C78.389 for containment testing and may be used in open luminaires.

S = When operated within 15 degrees of vertical, this lamp may be operated in an open luminaire provided the installation is not near people or flammable or combustible material, otherwise it must be operated in a suitably enclosed luminaire.

F = F-rated lamps require an enclosed fixture with a UV filter and lens interlock.

The 2005 NEC requires that luminaires which use a metal halide lamp shall be provided with either a containment barrier that encloses the lamp (historically referred to as an enclosed luminaire) or shall be provided with a means, typically a special lampholder, that will only accept an ANSI Type-O metal halide lamp. (Exception: This requirement will not apply to open luminaires with thick-glass parabolic reflector PAR lamps.)

UNDERSTANDING HIGH INTENSITY DISCHARGE LIGHTING (CONTINUED)

FIXTURE REQUIREMENT (continued)

The 2005 NEC also requires that metal halide luminaires for new construction/ major renovations in the playing and spectator areas of indoor sports, mixed use, and all purpose facilities, which are subject to physical damage, must be of a type that protects the lamp with a glass or plastic lens. Open luminaires will not be permitted.

For more information regarding the use of Type-O, S and E metal halide systems, please refer to the NEMA white paper on this subject that is freely available at NEMA.org.

HOT RESTRIKE

In most instances, if an HID lamp experiences a momentary power interruption or sudden voltage drop, the lamp may extinguish. A lamp that is still hot will not restart immediately. Because the arc tube within the lamp must cool down before it can re-start, HID lamps have hot restrike times ranging from 1-15 minutes depending on the product type.

KEY TO DATE OF MANUFACTURE

Consult your SYLVANIA Sales Representative or call 1-800-LIGHTBULB.

LAMP WARNINGS

HID Metal Halide and Mercury lamps are marked with an "R" on their packaging. These letters provide safety information about the lamp. Below is the text used by the FDA to describe each of the letters.

R: WARNING: This lamp can cause serious skin burn and eye inflammation from shortwave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available.

LIGHT CENTER LENGTH (LCL)

The light center length of HID lamps is a measurement from the center of the arc tube to the bottom of the lamp base.

LUMENS

Initial lumen ratings are based on photometry under controlled conditions of at least 10 hours per start in the prescribed position at rated lamp wattage after 100 operating hours. SOX lamp ratings are based on measurements at constant input voltage. Lamp performance under typical service conditions may vary from rated values. Operating universal METALARC® lamps in off-vertical positions will result in reduced lumen output.

Mean lumens are measured on ANSI reference circuits at rated wattage (SOX lamp ratings are based on input voltage) at 40% of average rated life except for those lamps with a "+" next to their life rating; these lamps are measured at 50% of average rated life. All measurements are based on ballast operation on systems with current crest factors of 1.8 or less. Higher current crest factors reduce values. In actual applications on CW or CWA ballasts, mean lumens may be higher than published ratings.

Unless otherwise noted, all photometry measurements are made on an ANSI reference ballast at rated lamp wattage.

MAXIMUM OVERALL LENGTH (MOL)

The maximum overall length of single-ended lamps is the maximum distance from the top of the bulb to the bottom of the base. For double-ended lamps, it is the maximum distance from end-to-end (excluding any leadwires).

ORDERING ABBREVIATION

Ordering abbreviation provides a shorthand description of the lamp, using a unique code, which can be used when ordering a lamp if you do not know the product number. This information can be found on the lamp etch.

PACKAGE QUANTITY

This identifies the number of lamps contained in a standard shipping carton.

PRODUCT NUMBER

The product number is a five-digit number used to identify a specific SYLVANIA lamp and should be used when ordering.

WARM UP TIME

Most HID lamps do not have instant on capabilities. It may take several minutes for the arc tube to stabilize before optimal light output is achieved.

WATTS

Watts shown are nominal lamp watts only.

HOW TO READ PRODUCT INFORMATION – HID

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Ballast Code	Pkg Qty	Lamp Finish	Operating Position	Fix Req	Avg Rated Life (hrs)	Approx. Lumens (Initial)	(Mean)	CRI	CCT (K)
100	E17	E26 Med	67506	LU100/MED	S54	20	Clear	Universal	O	24000+	9500	8000	22	2100
320	BT37	E39 Excl Mogul	64851	MCP320/C/PS/BU-ONLY/ 840/BT37 PB	M154/O	6	Coated	Base up within 15º only	O	20000	36000	27000	88	3900
360	BT37	E39 Mogul	64655	MS360/SS/BU-HOR	M59/S	6	Clear	BU-HOR	S	20000V 15000H	36000V 30000H	23500V 19000H	65	4000
1000	BT37	E39 Mogul	64351	M1000/PS/U/BT37	M141/E	6	Clear	Universal	E	15000V 9000H	110000V 107800H	96000V 86300H	65	3800

Please refer to the "Understanding High Intensity Discharge" section on this and previous page for definitions and explanations of the category headers.

HOW TO READ ORDERING ABBREVIATIONS

MS360/SS/BU-HOR		MCP320/C/PS/BU-ONLY/840/BT37 PB		LU100/D/MED		H39KC-175/DX	
MS	SUPER METALARC®	MCP	METALARC® Ceramic PRO-TECH®	LU	LUMALUX®	H39	ANSI Ballast Number
360	Wattage	320	Wattage	100	Wattage	175	Wattage
SS	SUPERSAVER®	C	Coated	D	Coated	DX	Brite White Deluxe Coated
BU-HOR	Operating Position: Base up through Horizontal	PS	Pulse Start	MED	Medium Base		
		BU-ONLY	Operating Position: Base up only				
		840	80+ CRI; 4000 CCT				
		BT37	Bulb Type				
		PB	POWERBALL				

Specifications subject to change without notice.

HID BRAND NAME GUIDE

Note: These tables are intended only as guides and may represent another lamp company's most similar product or product family rather than an identical match. Individual manufacturer's performance values should be consulted.

HID BRAND NAMES

SYLVANIA	GE*	PHILIPS**
METALARC®	Multi-Vapor	Metal Halide
METALARC POWERBALL®	ConstantColor CMH	MasterColor
METALARC PRO-TECH®	Protected High Output Multi-Vapor	Protected Metal Halide
SUPER METALARC	High Output Multi-Vapor	Metal Halide
METALARC Pulse Start	PulseArc Multi-Vapor	Pulse Start Metal Halide
METALARC SUPERSAVER®	Watt-Miser Multi-Vapor	Metal Halide
METALARC BRITELINE®	Arcstream MQI	Double-Ended Metal Halide

*Trademark or registered trademark of General Electric Company

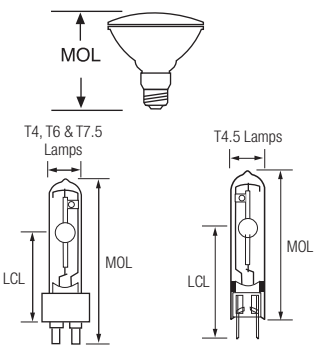
SYLVANIA	GE*	PHILIPS**
LUMALUX®	Lucalox	Ceramalux
LUMALUX / ECO®	Ecolux	Ceramalux ALTO
LUMALUX PLUS®/ ECO	Ecolux NC	Ceramalux ALTO NC
LUMALUX Standby	Standby Longlife Lucalox	Ceramalux Instant Restrike
SOX Low Pressure Sodium	SOX Low Pressure Sodium	SOX Low Pressure Sodium

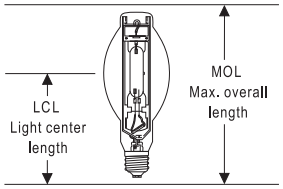
**Trademark or registered trademark of Philips

PHYSICAL DIMENSIONS

BRITELINE®	PHYSICAL SIZE	(dimensions in mm)
Bulb	**LCL**	**MOL**
T7	127	256
T8	127	254
T9	127	254

MERCURY VAPOR		(dimensions in inches)
Bulb	**LCL**	**MOL**
E17	3.75	5.44
ET23.5	5	7.5
ED28	5	8.31
ED37	7	11.5
BT56	9.5	15.38
PAR38	–	5.44



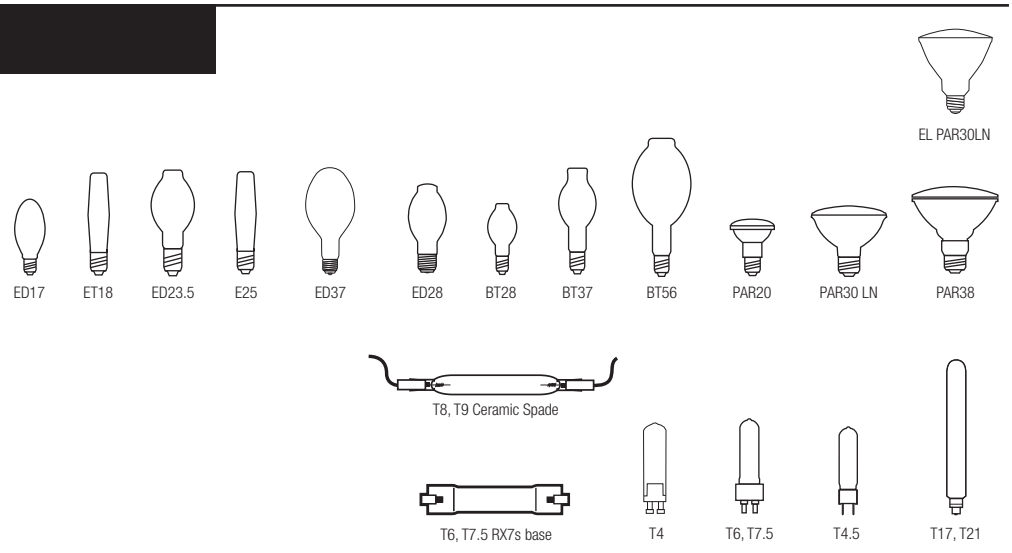


METALARC® METAL HALIDE Physical size of all Metalarc lamps		(dimensions in inches)
Bulb	**LCL**	**MOL**
T4/TF	1.18	2.24
T4.5/TC	2	3.19
T6	2.2	3.94
T6 (DE)	2.25	4.5
T7.5	2.2	4.13
PAR20	–	3.65
PAR30LN	–	4.76
PAR38	–	5.32
E17/ED17	3.4	5.44
ET18 (250W)	5.75	9.75
ET18 (400W)	6.14	9.75
ET23.5	4.49	6.97
BT28/ED28	5	8.31
BT37	7	11.5
BT56	9.5	15.38

LUMALUX® HIGH PRESSURE SODIUM Physical size of all LUMALUX lamps		(dimensions in inches)
Bulb	**LCL**	**MOL**
T7	5	10.06
T14.5	6.89	11.22
E17	3.43	5.43
ET18	5.75	9.75
ET23.5	5	7.75
E25	8.75	15.08
BT28	5	8.98
BT37	7	11.5

BULBS

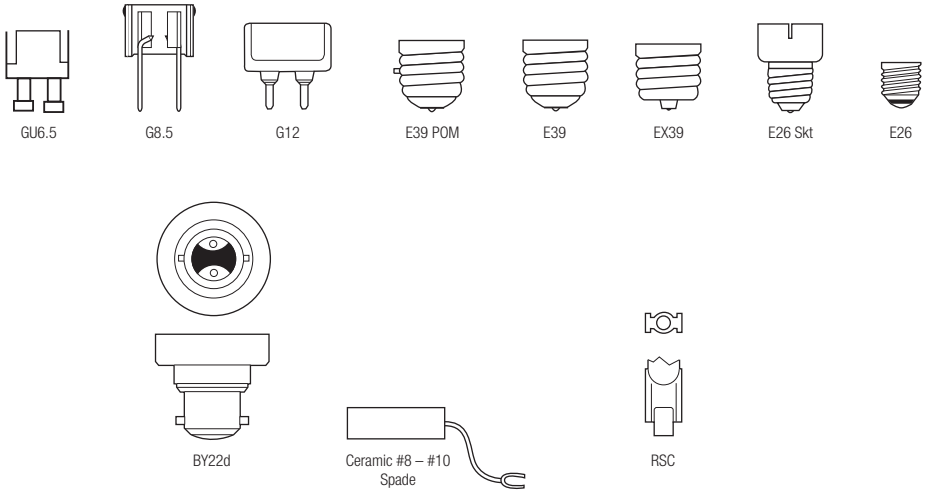
A bulb designation consists of a letter(s) to indicate the shape and a number(s) to indicate the approximate maximum diameter in eighths of an inch. Thus, an E17 lamp is an Ellipsoidal shape and 1-7/8 of an inch or 2-1/8 inches in diameter. Other letter designations include: BT = Bulbous Tubular; E or ED = Ellipsoidal; ET = Ellipsoidal Tubular; PAR = Parabolic; R = Reflector; T = Tubular.



BASES

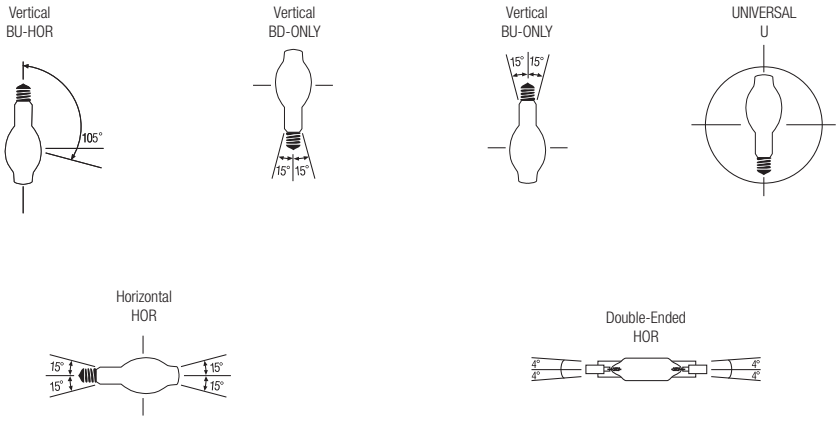
Lamps with screw bases have one lead-in wire soldered or welded to the center contact and the other soldered or welded to the upper rim of the base shell.

Bases with ceramic bodies have internal leads welded to either silver-plated contacts or external lead wires.

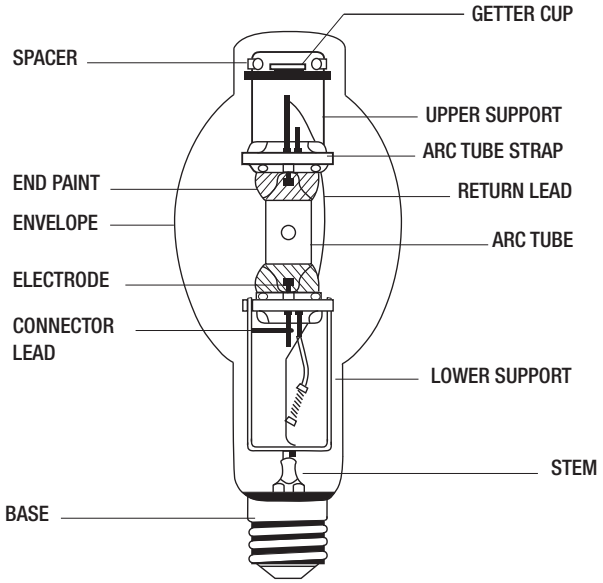


OPERATING POSITIONS

A designated operating position assures maximum lamp performance. Where it is not specified, the lamp is suitable for operation in any position.



GUIDE TO METAL HALIDE LAMPS



METALARC® Metal Halide lamps are designed for general lighting applications such as retail, commercial, industrial lighting and outdoor floodlighting where good color, long product life and high efficiency are desired. OSRAM SYLVANIA currently offers nine families of Metal Halide lamps:

STANDARD METALARC (M) – Offered in a range of wattages (from 175-1500 watts), standard METALARC metal halide lamps allow for design flexibility with multiple light source solutions to choose from. METALARC lamps have significantly higher efficacy than mercury vapor or incandescent products and considerably better CRI than mercury vapor and high pressure sodium lamps.

COMPACT METALARC (M/BT##) – These lamps have reduced outer jacket sizes compared to standard metal halide lamps for use in smaller fixtures. The reduced bulb diameter allows fixture manufacturers to design more versatile, less expensive and highly efficient luminaries.

SUPER METALARC (MS) – Super METALARC lamps are position dedicated, which means that they are specifically designed to be run in particular operating positions. Because of this feature, these lamps exhibit improved performance over standard, universal operating metal halide lamps of similar wattage. Product features include long life, higher maintained lumens and increased efficacy.

METALARC® PRO-TECH® (MP) – These are specially designed lamps that incorporate a protective shroud to contain a non-passive arc tube failure. METALARC PRO-TECH lamps can be used in open or enclosed fixtures. Dedicated bases are standard on both low and high wattage lamp types.

METALARC POWERBALL® CERAMIC (MC or MCP) – POWERBALL lamps use a patented round ceramic arc tube, which allows for a more uniform arc tube temperature, higher color rendering (>85) and improved color consistency. These lamps are ideal for applications that demand the best in color performance.

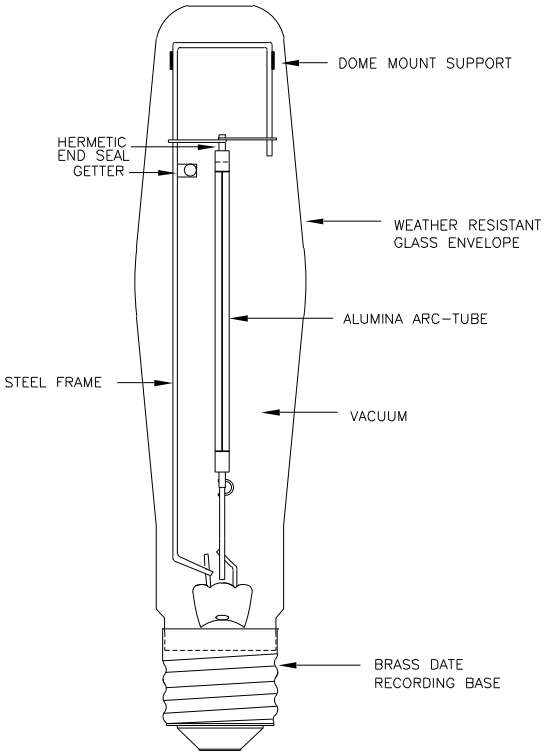
METALARC POWERBALL® EL (MCP) – The self-ballasted POWERBALL EL lamps offer energy saving solutions for applications desired superior light quality and are ideal replacements for halogen or incandescent lamps.

METALARC PULSE START (M/PS) – METALARC Pulse Start lamps utilize metal halide performance with proven ignitor technology for longer life, improved lumen maintenance and reduced color shift over lamp life compared to standard metal halide products. Lamp configurations include low and high wattage types, both clear and coated. METALARC PRO-TECH designs are also available for open fixture applications. All METALARC products lower than 175W and all METALARC POWERBALL products utilize Pulse Start technology exclusively.

METALARC SUPERSAVER® (M/SS) – Constructed with an enhanced arc tube for peak performance, METALARC SUPERSAVER lamps are designed as energy-saving, replacement metal halide lamps. The 360W SUPERSAVER lamp is a direct retrofit for existing 400W products, the 950W SUPERSAVER replaces 1000W lamps and the 150W SUPERSAVER replaces 175W lamps – no ballast change is required.

METALARC BRITELINE® (M) – These double-ended lamps are designed for compact fixtures, which provide excellent optical control and high efficiency. These higher wattage lamps are particularly well suited for sports lighting and outdoor floodlighting applications.

GUIDE TO HIGH PRESSURE SODIUM LAMPS



High Pressure Sodium lamps are one of the most efficient HID sources available today. These lamps are used for general lighting applications where high efficiency and long life are desired while color rendering is not critical. Typical applications include street lighting, parking lot lighting, building floodlighting and general area lighting.

LUMALUX PLUS® / ECO® AND LUMALUX PLUS – These environmentally friendlier lamps contain significantly less Mercury than standard high pressure sodium lamps. They will not cycle at the end of life and are rated for 40,000 hours life. All lamps operate on existing high pressure sodium ballasts.
LUMALUX Plus / ECO lamps are designed with lead-free bases and they pass the existing Federal TCLP limits.*

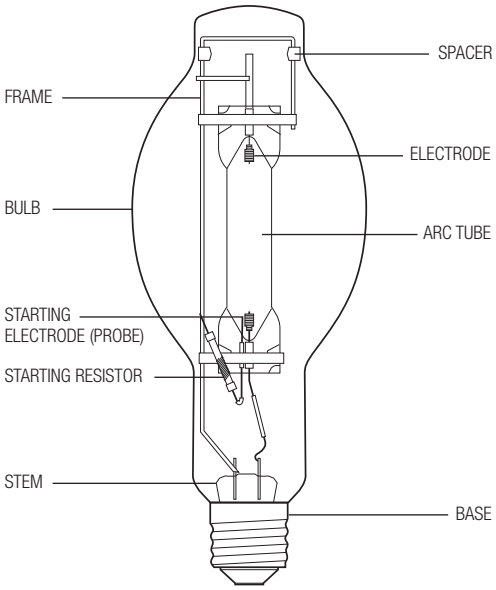
LUMALUX® AND LUMALUX / ECO – Available in a broad range of wattages, in both clear and coated configurations, LUMALUX and LUMALUX / ECO lamps are ideal for a variety of applications. LUMALUX medium based lamps are available in wattages ranging from 35-150 watts while mogul based lamps are offered in 50-1000 watts. The mogul based LUMALUX / ECO lamps operate on standard high pressure sodium ballasts and pass the Federal TCLP text.*

LUMALUX STANDBY – These lamps are designed with two arc tubes to provide instant restrike capability in the event of a momentary power interruption. With almost twice the life of standard high pressure sodium lamps, LUMALUX Standby lamps are a great way to reduce maintenance costs.

SOX – These energy efficient low pressure sodium lamps emit a characteristic yellow light that is ideal for certain exterior street and area lighting.

*based on NEMA LL Series Standards

GUIDE TO HIGH MERCURY VAPOR LAMPS



OSRAM SYLVANIA Mercury lamps are designed primarily for use in general lighting applications where good efficiency and long life are desired while color rendering requirements are moderate. Applications include street lighting, industrial hi-bay, parking lot lighting and general flood lighting.

STANDARD MERCURY – Available in a wide range of lamp types from 75-1000 watts, in both clear and coated configurations, Mercury vapor lamps are ideal for a variety of lighting applications. PAR lamps offer floodlighting and ultra-violet spectra for special lighting applications.


EL PAR30LN


PAR20


PAR30LN


PAR38

METALARC® POWERBALL® EL ECOLOGIC® Lamps

SELF-BALLASTED CERAMIC METAL HALIDE LAMPS FOR OPEN FIXTURES ONLY – UL1993 LISTED FOR DRY AND DAMP LOCATIONS

Watts	Bulb	Base	Product Number	Ordering Abbreviation	Pkg Qty	Beam Type	Beam Angle	Operating Position	Avg Rated Life (hrs)	MBCP	Approx. Lumens (Initial)	CRI	CCT (K)	Lamp Efficacy (LPW)
24	PAR30LN	E26Med	64902	MCP24EL/PAR30LN/U/828/SP10/ECO	6	SP	10°	Universal	12000	21500	1220	82	2800	51
			64901	MCP24EL/PAR30LN/U/828/NFL25/ECO	6	NFL	25°	Universal	12000	5000	1220	82	2800	51
			64903	MCP24EL/PAR30LN/U/828/FL30/ECO	6	FL	30º	Universal	12000	3700	1220	82	2800	51
			64904	MCP24EL/PAR30LN/U/828/FL40/ECO	6	FL	40°	Universal	12000	2500	1220	82	2800	51

METALARC POWERBALL Ceramic PAR ECOLOGIC Lamps

HIGH CRI, PULSE START, UV STOP METAL HALIDE LAMPS FOR OPEN OR ENCLOSED FIXTURES

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code[1]/ Fixture Req.	Pkg Qty	Beam Type	Beam Angle	Operating Position	Avg Rated Life (hrs)	MBCP	Approx. Lumens (Initial)	CRI (K)	CCT (K)	Lamp Efficacy (LPW)
20	PAR20	E26Med	64863	MCP20PAR20/U/830/FL/ECO PB	C156/0	12	FL	30°	Universal	12000	2650	900	82	3000	45
			64266	MCP20PAR30LN/U/830/SP/ECO PB	C156/0	6	SP	10°	Universal	12000	21000	1200	82	3100	60
	PAR30LN	E26Med	64267	MCP20PAR30LN/U/830/FL/ECO PB	C156/0	6	FL	30°	Universal	12000	4000	1200	82	3100	60
39	PAR20	E26Med	64264	MCP39PAR20/U/830/SP PB	C130/0	12	SP	10°	Universal	12000	20000	2000	87	3000	51
			64265	MCP39PAR20/U/830/FL PB	C130/0	12	FL	30°	Universal	12000	5000	2000	87	3000	51
	PAR30LN	E26Med	64269	MCP39PAR30LN/U/830/SP/ECO PB	C130/0	6	SP	10°	Universal	15000	39600	2300	85	3000	59
			64270	MCP39PAR30LN/U/830/FL/ECO PB	C130/0	6	FL	30°	Universal	15000	8000	2300	85	3000	59
70	PAR30LN	E26Med	64273	MCP70PAR30LN/U/930/SP/ECO PB	C139/0	6	SP	12°	Universal	15000	42000	3600	95	3000	51
			64274	MCP70PAR30LN/U/930/FL/ECO PB	C139/0	6	FL	30°	Universal	15000	12000	3600	95	3000	51
70	PAR38	E26Med Skt[2]	64749	MCP70PAR38/U/830/SP/ECO PB	C98/0	6	SP	15°	Universal	15000	40000	4300	88	3000	61
			64750	MCP70PAR38/U/830/FL/ECO PB	C98/0	6	FL	25°	Universal	15000	16000	4300	88	3000	61
			64751	MCP70PAR38/U/VWFL/830/ECO PB	C98/0	6	VWFL	65°	Universal	15000	3500	4300	88	3000	61
100	PAR38	E26Med Skt[2]	64752	MCP100PAR38/U/830/SP/ECO PB	C90/0	6	SP	15°	Universal	15000	58000	6500	88	3000	65
			64753	MCP100PAR38/U/830/FL/ECO PB	C90/0	6	FL	25°	Universal	15000	25000	6500	88	3000	65
			64754	MCP100PAR38/U/830/VWFL/ECO PB	C90/0	6	VWFL	60°	Universal	15000	6000	6500	88	3000	65
150	PAR38	E26Med Skt[2]	64841	MCP150/PAR38/U/830/SP/ECO PB	C102/0	6	SP	15°	Universal	15000	50000	9100	88	3000	61
			64842	MCP150/PAR38/U/830/FL/ECO PB	C102/0	6	FL	25°	Universal	15000	28000	9100	88	3000	61

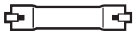
[1] The first letter of the ANSI code represents the lamp type; "C" for ceramic metal halide and "M" for quartz metal halide. The numbers following the lamp type refer to the electrical characteristics required by the ballast to start and operate the lamp reliably. Ceramic, "C", or quartz, "M" lamps with the same electrical characteristic number will operate on the same ballast (per ANSI C78.380-2007). For example, a 150W ceramic lamp with a C102 designation will operate on a 150W metal halide ballast with an M102 designation and vice versa.

[2] Lamps with a E26 medium skirt base are not compatible with exclusionary medium sockets.


T4


T4.5


T6, T7.5


T6, T7.5 – RX7s

METALARC POWERBALL Ceramic Tubular Single Ended & Double Ended Lamps

HIGH CRI, PULSE START, UV STOP METAL HALIDE LAMPS FOR ENCLOSED FIXTURES ONLY

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code[1]/ Fixture Req.	Pkg Qty	Finish	Operating Position	Avg Rated Life (hrs)	Approx. Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
TF													
15	T4	GU6.5	69043	MC15TF/U/GU6.5/830	C186/E	12	Clear	Universal	15000	1200 (900)	82	3000	80
20	T4	GU6.5	68842	MC20TF/U/GU6.5/830	C156/E	12	Clear	Universal	15000	1700 (1275)	85	3000	85
39	T4	GU6.5	69044	MC39TF/U/GU6.5/930	C130/E	12	Clear	Universal	15000	3400 (2550)	90	3000	87
TC													
20	T4.5	G8.5	64975	MC20TC/U/G8.5/830PB	C156/E	12	Clear	Universal	15000	1700 (1275)	83	3000	85
39	T4.5	G8.5	64971	MC39TC/U/G8.5/830PB	C130/E	12	Clear	Universal	15000	3400 (2720)	82	3000	87
70	T4.5	G8.5	64974	MC70TC/U/G8.5/930PB	C139/E	12	Clear	Universal	15000	6300 (5040)	95	3000	90
T6 and T7.5													
39	T6	G12	64963	MC39T6/U/G12/930	C130/E	12	Clear	Universal	15000	2800 (2240)	93	3000	72
			64970	MC39T6/U/G12/830PB	C130/E	12	Clear	Universal	15000	3400 (2720)	82	3000	87
			64325	MC39T6/U/G12/940PB	C130/E	12	Clear	Universal	15000	3300 (2640)	90	4200	85
70	T6	G12	64967	MC70T6/U/G12/940PB	C139/E	12	Clear	Universal	15000	6700 (5360)	93	4200	96
			64964	MC70T6/U/G12/930PB	C139/E	12	Clear	Universal	15000	6400 (5120)	95	3000	91
			64969	MC70T6/U/G12/830PB	C139/E	12	Clear	Universal	15000	7000 (5600)	87	3000	100
100	T6	G12	64160	MC100T6/U/G12/830	C191/E	12	Clear	Universal	15000	9500 (7600[2])	85	3000	95
150	T7.5	G12	64966	MC150T7.5/U/G12/940PB	C142/E	12	Clear	Universal	15000	14500 (11600)	95	4200	97
			64968	MC150T7.5/U/G12/830	C142/E	12	Clear	Universal	15000	15500 (12400)	91	3000	103
70	T6	RX7s	64972	MC70T6/DE/830PB	C139/E	12	Clear	HOR ±15°	12000	6900 (5520)	88	3000	99
150	T7.5	RX7s	64794	MC150T7.5/DE/830PB	C142/E	12	Clear	HOR ±15°	12000	14800 (11840)	91	3000	99

[1] The first letter of the ANSI code represents the lamp type; "C" for ceramic metal halide and "M" for quartz metal halide. The numbers following the lamp type refer to the electrical characteristics required by the ballast to start and operate the lamp reliably. Ceramic, "C", or quartz, "M" lamps with the same electrical characteristic number will operate on the same ballast (per ANSI C78.380-2007). For example, a 150W ceramic lamp with a C102 designation will operate on a 150W metal halide ballast with an M102 designation and vice versa.

[2] Preliminary data, visit www.sylvania.com for updates.

Specifications subject to change without notice.


E17


ET18


ET23.5

METALARC® POWERBALL® Ceramic E17 & ET23.5 Lamps

HIGH CRI, PULSE START METAL HALIDE LAMPS FOR ENCLOSED FIXTURES

See product information bulletin (HID053) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
E17													
70	E17	E26Med	64862	MC70/U/MED/830	C98/E	12	Clear	Universal	20000	6500 (4850)	88	3000	93
100	E17	E26Med	64864	MC100/U/MED/830	C90/E	12	Clear	Universal	20000	9700 (7150)	88	3000	97
150	E17	E26Med	64866	MC150/U/MED/830	C102/E	12	Clear	Universal	20000	15100 (11200)	85	3000	101
E18													
200	ET18	E39 Mogul	64917	MC200/PS/U/ET18/940	C190/E	10	Clear	Universal	24000	21500 (16125)	95	4000	108
ET23.5													
100	ET23.5	E39 Mogul	64918	MC100/U/ET23.5/942	C90/E	20	Clear	Universal	24000	10000 (7000)	94	4200	100
150	ET23.5	E39 Mogul	64915	MC150/U/ET23.5/942	C102/E	20	Clear	Universal	24000	15000 (10500)	90	4200	100


E17


BT28


BT37

METALARC POWERBALL Ceramic PRO-TECH® E17 & High Wattage Lamps

HIGH CRI, PULSE START METAL HALIDE LAMPS FOR OPEN OR ENCLOSED FIXTURES

See product information bulletin (HID053) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code[1]/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
50	E17	EX26Med	64840	MCP50/U/MED/830PB	C110/0	12	Clear	Universal	12000	4100 (2850)	88	3000	82
			64849	MCP50/C/U/MED/830PB	C110/0	12	Coated	Universal	12000	3800 (2640)	88	2900	76
70	E17	EX26Med	64111	MCP70/U/MED/940PB	C98/0	12	Clear	Universal	20000	6000 (4365)	93	4000	86
			64112	MCP70/C/U/MED/940PB	C98/0	12	Coated	Universal	20000	5600 (4000)	93	3800	80
			64739	MCP70/U/MED/830PB	C98/0	12	Clear	Universal	20000	5900 (4365)	88	3000	84
			64740	MCP70/C/U/MED/830PB	C98/0	12	Coated	Universal	20000	5500 (3900)	88	3000	79
100	E17	EX26Med	64315	MCP100/U/MED/940PB	C90/0	12	Clear	Universal	20000	8200 (6150)	93	4000	82
			64743	MCP100/U/MED/830PB	C90/0	12	Clear	Universal	20000	9000 (6500)	88	3000	90
			64744	MCP100/C/U/MED/830PB	C90/0	12	Coated	Universal	20000	8100 (5990)	88	3000	81
150	E17	EX26Med	64741	MCP150/U/MED/830PB	C102/0	12	Clear	Universal	20000	13000 (11000)	87	3000	87
			64742	MCP150/C/U/MED/830PB	C102/0	12	Coated	Universal	20000	12000 (10000)	88	3000	80
200	BT28	EX39Excl Mogul	64260	MCP200/PS/BU-ONLY/940	C190/0	6	Clear	BU ±15°	20000	21000 (17000[2])	90	4200	98
250	BT28	EX39Excl Mogul	64786	MCP250/PS/BU-ONLY/940PB	C153/0	6	Clear	BU ±15°	20000	24000 (19200)	94	4000	96
			64821	MCP250/C/PS/BU-ONLY/940PB	C153/0	6	Coated	BU ±15°	20000	22500 (18000)	94	4000	90
320	BT37	EX39Excl Mogul	64834	MCP320/PS/BU-ONLY/840PB	C154/0	6	Clear	BU ±15°	20000	37500 (28125)	88	4000	117
			64851	MCP320/C/PS/BU-ONLY/840PB	C154/0	6	Coated	BU ±15°	20000	36000 (27000)	88	3900	113

Lamps between 175W and 400W operating on ballasts having a sustaining voltage less than 270V, lamp life may be significantly reduced.

[1] The first letter of the ANSI code represents the lamp type; "C" for ceramic metal halide and "M" for quartz metal halide. The numbers following the lamp type refer to the electrical characteristics required by the ballast to start and operate the lamp reliably. Ceramic, "C", or quartz, "M" lamps with the same electrical characteristic number will operate on the same ballast (per ANSI C78.380-2007). For example, a 150W ceramic lamp with a C102 designation will operate on a 150W metal halide ballast with an M102 designation and vice versa.

[2] Preliminary data, visit www.sylvania.com for latest rating.


ED17


ED28


ET23.5


BT28

METALARC® Pulse Start Lamps

HIGH OUTPUT, REDUCED COLOR SHIFT METAL HALIDE LAMPS FOR ENCLOSED FIXTURES

See product information bulletins (HID021 and HID059) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
70	E17	E26Med	64836	M70/U/MED	M98/E	12	Clear	Universal	12000	5600 (3400)	75	4000	80
100	E17	E26Med	64818	M100/U/MED	M90/E	20	Clear	Universal	12000	8500 (4675)	75	4000	85
150	E17	E26Med	64785	M150/U/MED	M102/E	20	Clear	Universal	12000	12900 (4300)	75	4300	86
175	E17	E26Med	64171	MS175/PS/BU-ONLY/MED	M152/E	12	Clear	BU ±15°	15000	17500 (12800)	65	4000	100
	ED28	E39Mogul	64319	M175/PS/U	M152/E	6	Clear	Universal	12000V 9000H	14400V (10000V) 12800H (8300H)	65	4000	82 73
			64815	MS175/PS/BU-ONLY	M152/E	12	Clear	BU ±15°	15000	17500 (12800)	65	4000	100
			64816	MS175/C/PS/BU-ONLY	M152/E	12	Coated	BU ±15°	15000	16600 (12500)	70	3700	95
200	ET23.5	E39Mogul	64837	MS200/PS/BU-ONLY/ET23.5	M136/E	12	Clear	BU ±15°	15000	19000 (13300)	65	4200	95
	BT28	E39Mogul	64838	MS200/PS/BU-ONLY/BT28	M136/E	6	Clear	BU ±15°	15000	19000 (13500)	65	4000	95
			64839	MS200/C/PS/BU-ONLY/BT28	M136/E	6	Coated	BU ±15°	15000	18000 (12800)	70	3800	90
250	BT28	E39Mogul	64320	M250/PS/U	M153/E	6	Clear	Universal	15000V 12000H	22000V (15400V) 19000H (14000H)	65	3800	88 76
			64578	MS250/PS/BU-ONLY	M153/E	6	Clear	BU ±15°	20000[1]	23000 (17000)	65	4200	92
			64617	MS250/C/PS/BU-ONLY	M153/E	6	Coated	BU ±15°	20000[1]	21500 (15500)	70	3600	86

Lamps between 175W and 400W operating on ballasts having a sustaining voltage less than 270V, lamp life may be significantly reduced.
Lamps > 400W operating on ballasts having a sustaining voltage less than 310V, lamp life may be significantly reduced.
[1] 20,000 average rated life based on 10 hrs/start. 30,000 average rated life based on 120 hrs/start.


BT28


BT37

HIGH OUTPUT, REDUCED COLOR SHIFT METAL HALIDE LAMPS FOR ENCLOSED FIXTURES (CONT.)

See product information bulletins (HID021 and HID059) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
320	BT28	E39Mogul	64507	MS320/PS/BU-HOR	M154/E	6	Clear	BU-HOR	20000V 15000H	30000V (21000V) 28000H (19700H)	65	4300	94 88
			64646	MS320/C/PS/BU-HOR	M154/E	6	Coated	BU-HOR	20000V 15000H	30000V (21000V) 28000H (18400H)	70	3900	94 88
400	BT28	E39Mogul	64188	M400/PS/U/BT28	M155/E	6	Clear	Universal	20000V 15000H	36000V (25500V) 31000H (22400H)	65	4000	90 78
			64191	MS400/PS/BD-ONLY/BT28	M155/E	6	Clear	BD ±15°	20000	40000 (32500)	65	4100	100
			64189	MS400/PS/BU-ONLY/BT28	M155/E	6	Clear	BU ±15°	20000	40000 (32500)	65	4100	100
	BT37	E39Mogul	64321	M400/PS/U	M155/E	6	Clear	Universal	20000V 15000H	36000V (25500V) 31000H (22400H)	65	4000	90 78
			64525	MS400/PS/BU-ONLY	M155/S	6	Clear	BU ±15°	20000[2]	42000 (31000)	65	4000	105
			64527	MS400/C/PS/BU-ONLY	M155/S	6	Coated	BU ±15°	20000[2]	42000 (29000)	70	3600	105
750	BT37	E39Mogul	64787	MS750/PS/BU-HOR/BT37	M149/E	6	Clear	BU-HOR	20000V 9000H	78000V (67000V) 68000H (56000H)	65	4000	104 91
			64822	MS750/C/PS/BU-HOR/BT37	M149/E	6	Coated	BU-HOR	20000V 9000H	78000V (63000V) 65000H (53000H)	70	3700	100 87
1000	BT37	E39Mogul	64351	M1000/PS/U/BT37	M141/E	6	Clear	Universal	20000V 9000H	110000V (96000V) 107800H (86300H)	65	3800	110 108

Lamps between 175W to 400W operated on ballasts having a sustaining voltage less than 270V, lamp life may be significantly reduced.

Lamps > 400W operating on ballasts having a sustaining voltage less than 310V, lamp life may be significantly reduced.

[1] 20,000 average rated life based on 10 hrs/start. 30,000 average rated life based on 120 hrs/start.


E17


BT28


BT37

METALARC® PRO-TECH® Pulse Start Lamps

HIGH OUTPUT, REDUCED COLOR SHIFT METAL HALIDE LAMPS FOR OPEN OR ENCLOSED FIXTURES

See product information bulletins (HID021 and HID059) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
50	E17	EX26Med	64587	MP50/U/MED	M110/0	20	Clear	Universal	20000V 10000H	3450 (1900)	70	3000	69
			64588	MP50/C/U/MED	M110/0	20	Coated	Universal	20000V 10000H	3200 (1820)	70	2900	64
70	E17	EX26Med	64547	MP70/U/MED	M98/0	20	Clear	Universal	15000V 10000H	5200 (3400)	75	3000	74
			64546	MP70/C/U/MED	M98/0	20	Coated	Universal	15000V 10000H	4700 (3100)	75	2900	67
100	E17	EX26Med	64417	MP100/U/MED	M90/0	20	Clear	Universal	15000V 10000H	8500 (5525)	75	3000	85
			64418	MP100/C/U/MED	M90/0	20	Coated	Universal	15000V 10000H	7900 (5800)	75	2900	79
150	E17	EX26Med	64402	MP150/U/MED	M102/0	20	Clear	Universal	15000V 10000H	12900 (8000)	75	3000	86
			64406	MP150/C/U/MED	M102/0	20	Coated	Universal	15000V 10000H	11600 (7500)	75	2900	77
250	BT28	EX39Excl Mogul	64789	MP250/PS/BU-ONLY	M153/0	6	Clear	BU ±15°	15000	22500 (17000)	65	4000	90
			64790	MP250/C/PS/BU-ONLY	M153/0	6	Coated	BU ±15°	15000	21000 (16000)	70	4000	84
320/350	BT28	EX39Excl Mogul	64391	MP320/350/PS/BU-ONLY/BT28	M154/0	6	Clear	BU ±15°	20000	28600 (21000)	65	3800	89
					M131/0					33500 (24000)		3600	105
			64349	MP320/350/C/PS/BU-ONLY/BT28	M154/0	6	Coated	BU ±15°	20000	27700 (19000)	70	3600	87
					M131/0					32000 (22000)		3600	91
350/400	BT37	EX39Excl Mogul	64769	MP350/400/PS/BU-ONLY	M131/0	6	Clear	BU ±15°	20000	33000 (24500)	65	3700	94
					M155/0					40000 (29500)		3500	100
			64770	MP350/400/C/PS/BU-ONLY	M131/0	6	Coated	BU ±15°	20000	32000 (23000)	70	3500	91
					M155/0					39000 (28000)		3300	10


ED17


BT28


BT37


BT56

METALARC PRO-TECH Lamps

PROBE START METAL HALIDE LAMPS FOR OPEN OR ENCLOSED FIXTURES

See product information bulletin (HID058) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
175	ED17	EX26Med	64733	MP175/BU-ONLY/MED	M57/O	20	Clear	BU ±15°	10000	14400 (10800)	65	3600	82
	BT28	EX39Excl Mogul	64773	MP175/BU-ONLY	M57/O	6	Clear	BU ±15°	10000	14400 (10200)	65	4000	82
			64774	MP175/C/BU-ONLY	M57/O	6	Coated	BU ±15°	10000	12800 (7800)	70	3800	73
250	BT28	EX39Excl Mogul	64404	MP250/BU-ONLY	M58/O	6	Clear	BU ±15°	10000	23000 (17000)	65	4000	92
			64405	MP250/C/BU-ONLY	M58/O	6	Coated	BU ±15°	10000	20000 (14350)	70	3800	80
400	BT37	EX39Excl Mogul	64705	MP400/BU-ONLY	M59/O	6	Clear	BU ±15°	20000	40000 (26000)	65	3600	100
			64706	MP400/C/BU-ONLY	M59/O	6	Coated	BU ±15°	20000	38500 (25000)	70	3400	96
			64717	MP400/BD-ONLY	M59/O	6	Clear	BD ±15°	20000	40000 (26000)	65	3600	100
1000	BT56	EX39Excl Mogul	64714	MP1000/BU-ONLY	M47/O	6	Clear	BU ±15°	15000	109000 (87500)	65	3500	109
			64716	MP1000/C/BU-ONLY	M47/O	6	Coated	BU ±15°	15000	102000 (82000)	70	3200	102

METALARC SUPER Lamps

HIGH OUTPUT, POSITION DEDICATED PROBE START METAL HALIDE LAMPS FOR ENCLOSED FIXTURES

See product information bulletin (HID034) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
175	BT28	E39 POM	64439	MS175/HOR	M57/E	6	Clear	HOR+/- 15°	10000	15000 (8000)	65	4200	86
250	BT28	E39POM	64448	MS250/HOR	M58/E	6	Clear	HOR ±15°	10000	23000 (15000)	65	4200	92
400	BT28	E39POM	64443	MS400/HOR/BT28	M59/E	6	Clear	HOR ±15°	20000	39000 (26000)	65	4200	98
	BT37	E39POM	64445	MS400/HOR	M59/E	6	Clear	HOR ±15°	20000	39000 (25000)	65	4200	98
		E39Mogul	64450	MS400/BU-ONLY	M59/S	6	Clear	BU ±15°	20000	42000 (26000)	65	4000	105
			64452	MS400/C/BU-ONLY	M59/S	6	Coated	BU ±15°	20000	42000 (24700)	70	3600	105
1000	BT56	E39Mogul	64435	MS1000/BU-ONLY	M47/S	6	Clear	BU ±15°	18000	110000 (92000)	65	4000	110
			64436	MS1000/BD-ONLY	M47/S	6	Clear	BU ±15°	18000	115000 (92000)	65	4000	115


BT28


BT37


BT56

METALARC® SUPERSAVER® Lamps

ENERGY SAVING PROBE START METAL HALIDE LAMPS, DIRECT RETROFIT FROM STANDARD 175W, 400W OR 1000W SYSTEMS

See product information bulletin (HID022) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code[1]/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
150	BT28	E39Mogul	64719	M150/SS/U/BT28	M107/E	6	Clear	Universal	10000V 7500H	13000V (7500V) 12000H (7500H)	65	4000	87 80
360	BT37	E39Mogul	64655	MS360/SS/BU-HOR	M165/S	6	Clear	BU-HOR	20000V 15000H	36000V (23500V) 30000H (19000H)	65	4000	100 83
			64656	MS360/C/SS/BU-HOR	M165/S	6	Coated	BU-HOR	20000V 15000H	36000V (22500V) 30000H (19000H)	70	3600	100 83
		EX39 Excl Mogul	64737	MSP360/SS/BU-ONLY	M165/O	6	Clear	BU ±15°	20000	35000 (23500)	65	4000	97
			64738	MSP360/C/SS/BU-ONLY	M165/O	6	Coated	BU ±15°	20000	34000 (22500)	70	3600	94
950	BT56	E39Mogul	64850	M950/SS/U/BT56	M176/E	6	Clear	Universal	18000V 12000H	103000V (80000V) 90000H (64000H)	65	4000	108 95

[1] 150W lamps operate on M57 or M107 ballasts.
360W lamps operate on M59 or M165 ballasts.
950W lamps operate on M47 or M176 ballasts.

H
I
D


E17


BT28


ET18


BT37

METALARC Standard Probe Start Lamps

PROBE START METAL HALIDE LAMPS

See product information bulletin (HID033) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
175	E17	E26Med	64479	M175/U/MED	M57/E	20	Clear	Universal	10000V 7500H	14400V (9300V) 12800H (9300H)	65	4000	82 73
			64480	M175/C/U/MED	M57/E	20	Coated	Universal	10000V 7500H	13000V (8400V) 11080H (8400H)	70	3600	74 63
	BT28	E39Mogul	64471	M175/U	M57/E	6	Clear	Universal	10000V 7500H	14400V (9300V) 12800H (9300H)	65	4200	82 73
			64472	M175/C/U	M57/E	6	Coated	Universal	10000V 7500H	14000V (8400V) 12000H (8400H)	70	3800	80 69
250	ET18	E39Mogul	64474	M250/U/ET18	M58/E	10	Clear	Universal	10000V 7500H	22000V (17500V) 20000H (13500H)	65	4000	88 80
	BT28	E39Mogul	64457	M250/U	M58/E	6	Clear	Universal	10000V 7500H	22000V (15000V) 20000H (13000H)	65	4200	88 80
			64458	M250/C/U	M58/E	6	Coated	Universal	10000V 7500H	21500V (17000V) 19500H (14000H)	70	3800	86 78
400	ET18	E39Mogul	64575	M400/U/ET18	M59/E	10	Clear	Universal	20000V 15000H	32000V (25000V) 33000H (20500H)	65	4000	90 83
	BT28	E39Mogul	64488	M400/U/BT28	M59/E	6	Clear	Universal	20000V 15000H	36000V (25000V) 32000H (20500H)	65	4000	90 80
			64489	M400/C/U/BT28	M59/E	6	Coated	Universal	20000V 15000H	36000V (25000V) 32000H (20500H)	70	3600	90 80
	BT37	E39Mogul	64490	M400/U	M59/S	6	Clear	Universal	20000V[1] 15000H	36000V (23500V) 32000H (20500H)	65	4000	90 80
			64492	M400/C/U	M59/S	6	Coated	Universal	20000V[1] 15000H	36000V (22500V) 32000H (20500H)	70	3700	90 80

[1] 20,000 average rated life based on 10 hrs/start. 30,000 average rated life based on 120 hrs/start.

Lumens will be lower for operating positions other than base up. See lumen tilt factor curve in the Metal Halide Specification Guide (HID017).


BT37


BT56

METALARC® Standard Probe Start Lamps

PROBE START METAL HALIDE LAMPS

See product information bulletin (HID033) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
1000	BT37	E39Mogul	64469	M1000/U/BT37	M47/E	6	Clear	Universal	15000V 9000H	110000V (96000V) 107800H (86300H)	65	3800	110 108
	BT56	E39Mogul	64468	M1000/U	M47/S	6	Clear	Universal	18000V 12000H	110000V (86000V) 107800H (86000H)	65	4000	110 109
1000	BT56	E39Mogul	64470	M1000/C/U	M47/S	6	Coated	Universal	18000V 12000H	107000V (80000V) 101600H (80700H)	70	3400	107 102
1500	BT56	E39Mogul	64431	M1500/BU-HOR	M48/E	6	Clear	BU-HOR	3000[3]	170000V (140000V) 153000H (140000H)	70	4000	113 102

[3] Published rated life based on 5 hours per start. Life rating will increase to 6,000 hours if operated for at least 10 hours per start in the base up position. Lumens will be lower for operating positions other than base up. See lumen tilt factor curve in the Metal Halide Specification Guide (HID017).

H
I
D


E17


ET18


ET23.5


E25

LUMALUX PLUS® XL ECOLOGIC Lamps

DUAL ARC-TUBE, NON-CYCLING HIGH PRESSURE SODIUM, INSTANT RESTRIKE, LONG LIFE

See product information bulletin (HID073) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code[1]/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
100	ET23.5	E39 Mogul	67800	LU100/PLUS/XL/ECO	S54	20	Clear	Universal	80000	9800 (7800)	22	2100	98
150	ET23.5	E39 Mogul	67801	LU150/PLUS/XL/ECO	S55	20	Clear	Universal	80000	15200 (12150)	22	2100	101

LUMALUX PLUS and LUMALUX PLUS ECOLOGIC® Lamps

NON-CYCLING HIGH PRESSURE SODIUM, LONG LIFE

See product information bulletin (HID018) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
50	ET23.5	E39Mogul	67607	LU50/PLUS/ECO	S68/0	20	Clear	Universal	40000	4000 (2140)	22	1900	80
70	E17	E26Medium	67322	LU70/PLUS/MED	S62/0	20	Clear	Universal	40000	6300 (5610)	22	1900	90
	ET23.5	E39Mogul	67497	LU70/PLUS/ECO	S62/0	20	Clear	Universal	40000	6300 (5020)	22	1900	90
100	E17	E26Medium	67323	LU100/PLUS/MED	S54/0	20	Clear	Universal	40000	10000 (8600[4])	22	2100	100
	ET23.5	E39Mogul	67559	LU100/PLUS/ECO	S54/0	20	Clear	Universal	40000	10000 (7940[4])	22	2100	100
150	ET23.5	E39Mogul	67494	LU150/55/PLUS/ECO[1]	S55/0	20	Clear	Universal	40000	16000 (14010[4])	22	2100	107
200	ET18	E39Mogul	67495	LU200/PLUS/ECO	S66/0	20	Clear	Universal	40000	22000 (19030)	22	2100	110
250	ET18	E39Mogul	67572	LU250/PLUS/ECO	S50/0	20	Clear	Universal	40000	29000 (26200)	22	2100	116
310	ET18	E39Mogul	67660	LU310/PLUS/ECO	S67/0	20	Clear	Universal	40000	37000 (34090)	22	2100	119
400	ET18	E39Mogul	67312	LU400/PLUS/ECO	S51/0	20	Clear	Universal	40000	50000 (42740)	22	2100	125
1000	E25	E39Mogul	67316	LU1000/PLUS/ECO[3]	S52/0	6	Clear	Universal	30000+	130000 (124000[2])	22	2100	130

[1] LU150/100 (100V) and LU150/55 (55V) lamps are not interchangeable.

[2] Mean lumens are measured on ANSI reference circuits at rated wattage at 40% of average rated life except for those lamps with a "+" next to their life rating; these lamps are measured at 50% of average rated life.

[3] Use with 5000V pulse rated sockets only.

[4] Lamp lumen maintenance is 90% at 30,000 hours.


ET23.5


ET18


E25

LUMALUX® STANDBY Lamps

DUAL ARC TUBE, INSTANT RESTRIKE[5], LONG LIFE

See product information bulletin (HID036) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life[2] (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
70	ET23.5	E39Mogul	67540	LU70/SBY	S62/0	20	Clear	Universal	40000	6050 (4950)	22	1900	86
100	ET23.5	E39Mogul	67542	LU100/SBY	S54/0	20	Clear	Universal	40000	9500 (7600)	22	2100	95
150	ET23.5	E39Mogul	67544	LU150/55/SBY[2]	S55/0	20	Clear	Universal	40000	15700 (12100)	22	2100	105
200	ET18	E39Mogul	67586	LU200/100/SBY[2]	S66/0	20	Clear	Universal	40000	21500 (18000)	22	2100	108
250	ET18	E39Mogul	67582	LU250/SBY	S50/0	20	Clear	Universal	40000	27500 (23200)	22	2100	110
400	ET18	E39Mogul	67584	LU400/SBY	S51/0	20	Clear	Universal	40000	47500 (40000)	22	2100	119
1000	E25	E39Mogul	67543	LU1000/SBY[3]	S52/0	6	Clear	Universal	30000+[2]	127000 (115000)	22	2100	127

[1] LU150/100 (100V) and LU150/55 (55V) lamps are not interchangeable.
[2] Standby (instant restrike) feature not guaranteed beyond 24,000 operating hours.
[3] Use with 5000V pulse rated sockets only.
[5] Standby (instant restrike) feature not guaranteed beyond 48,000 operating hours.

PLANTASTAR® Lamps

PLANT GROWTH / HORTICULTURE

See product information bulletin (HID044) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
1000	E25	E39Mogul	67314	LU1000/PLANTASTAR[3]	S52/0	6	Clear	Universal	24000	130000 (124000)	22	2100	130

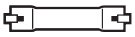
[3] Use with 5000V pulse rated sockets only.


ET23.5


BT28


ET18


BT37


T7, RX7s


E25

LUMALUX Standard and LUMALUX ECOLOGIC® Lamps

See product information bulletin (HID027) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean[2])	CRI	CCT (K)	Lamp Efficacy (LPW)
E39 Mogul													
50	ET23.5	E39Mogul	67510	LU50/ECO	S68/0	20	Clear	Universal	30000+	4000 (3200)	22	1900	80
70	ET23.5	E39Mogul	67512	LU70/ECO	S62/0	20	Clear	Universal	30000+	6300 (5500)	22	1900	90
100	ET23.5	E39Mogul	67514	LU100/ECO	S54/0	20	Clear	Universal	30000+	9500 (7150)	22	2100	95
			67515	LU100/D	S54/0	20	Coated	Universal	30000+	8800 (5620)	22	2100	88
150	ET23.5	E39Mogul	67516	LU150/55/ECO[1]	S55/0	20	Clear	Universal	30000+	16000 (12230)	22	2100	107
			67517	LU150/55/D[1]	S55/0	20	Coated	Universal	30000+	14000 (12500)	22	2100	93
	BT28	E39Mogul	67518	LU150/100[1]	S56/0	10	Clear	Universal	30000+	15700 (13550)	22	2100	105
200	ET18	E39Mogul	67576	LU200/ECO	S66/0	20	Clear	Universal	30000+	22000 (19800)	22	2100	110
250	ET18	E39Mogul	67578	LU250/ECO	S50/0	10	Clear	Universal	30000+	26000 (24400)	22	2100	104
	BT28	E39Mogul	67521	LU250/D	S50/0	20	Coated	Universal	30000+	29000 (24700)	22	2100	116
310	ET18	E39Mogul	67580	LU310/ECO	S67/0	20	Clear	Universal	30000+	37000 (32900)	22	2100	119
400	ET18	E39Mogul	67533	LU400/ECO	S51/0	20	Clear	Universal	30000+	50000 (40300)	22	2100	125
	T7	RX7s RSC	67527	LU400T7/RSC	S51/0	10	Clear	Horizontal	24000	45000 (41400)	21	2100	113
750	BT37	E39Mogul	67547	LU750[3]	S111/0	6	Clear	Universal	24000+	105000 (94500)	22	2100	140
1000	E25	E39Mogul	67307	LU1000/ECO[3]	S52/0	6	Clear	Universal	24000+	130000 (124000)	22	2100	130

[1] LU150/100 (100V) and LU150/55 (55V) lamps are not interchangeable.

[2] Mean lumens are measured on ANSI reference circuits at rated wattage at 40% of average rated life except for those lamps with a "+" next to their life rating; these lamps are measured at 50% of average rated life.

[3] Use with 5000V pulse rated sockets only.

E17

LUMALUX® Standard and LUMALUX ECOLOGIC® Lamps (Cont.)

See product information bulletin (HID027) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)[2]	CRI	CCT (K)	Lamp Efficacy (LPW)
E26 Medium													
35	E17	E26Medium	67500	LU35/MED	S76/0	20	Clear	Universal	16000+	2250 (2050)	22	1900	64
			67501	LU35/D/MED	S76/0	20	Coated	Universal	16000+	2100 (1935)	22	1900	60
50	E17	E26Medium	67502	LU50/MED	S68/0	20	Clear	Universal	24000+	4000 (3600)	21	1900	80
			67503	LU50/D/MED	S68/0	20	Coated	Universal	24000+	3700 (3420)	22	1900	74
70	E17	E26Medium	67504	LU70/MED	S62/0	20	Clear	Universal	24000+	6300 (5350)	22	1900	90
			67505	LU70/D/MED	S62/0	20	Coated	Universal	24000+	5800 (4900)	22	1900	83
100	E17	E26Medium	67506	LU100/MED	S54/0	20	Clear	Universal	24000+	9500 (8000)	22	2100	95
150	E17	E26Medium	67508	LU150/55/MED[1]	S55/0	20	Clear	Universal	24000+	15800 (13400)	22	2100	102
			67509	LU150/55/D/MED[1]	S55/0	20	Coated	Universal	24000+	14500 (12300)	22	2100	97

[1] LU150/100 (100V) and LU150/55 (55V) lamps are not interchangeable.

[2] Mean lumens are measured on ANSI reference circuits at rated wattage at 40% of average rated life except for those lamps with a "+" next to their life rating; these lamps are measured at 50% of average rated life.

T7, T8 RX7s base

T8, T9 Ceramic Spade


E17


PAR38


ET23.5


ED37, ED28


BT56

METALARC® BRITELINE® Lamps

DOUBLE-ENDED HIGH OUTPUT SPORT LIGHTING – ENCLOSED FIXTURES ONLY

See product information bulletin (HID028) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg. Rated Life (hrs)	Approx. Lumens Initial (Mean)	CRI	CCT (K)	Lamp Efficacy (LPW)
1500	T7	RX7s RSC	66619	M1500T7/DE	M_F[1]	10	Clear	HOR ±4°	3000	150000 (127500)	65	4200	100
	T8	Cer #8-10 Spade	66632	M1500T8/DE	M133/F	10	Clear	HOR ±4°	6000	150000 (127500)	65	4200	100
2000	T8	RX7s RSC	66627	M2000T8/DE	M_F[1]	10	Clear	HOR ±4°	3000	200000 (170000)	65	4000	100
	T9	Cer #8-10 Spade	66631	M2000T9/DE	M134/F	10	Clear	HOR ±4°	3000	180000 (153000)	65	4200	90

Use in equipment where gasket material is protected from all lamp radiation.
Use with 4-5kV igniter.
For use where seal temperature does not exceed 350C.
[1] Consult your OSRAM SYLVANIA Lighting Representative for lamp/ballast compatibility.

Mercury Vapor Lamps

See product information bulletin (HID047) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Beam Type	Beam Angle	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean[1])	CRI	CCT (K)	Lamp Efficacy (LPW)
75	E17	E26Med	69402	H43AV-75/DX	H43/0	20			Coated	Universal	16000+	2700 (1800)	45	4300	36
100	E17	E26Med	69403	H38AV-100/DX	H38/0	20			Coated	Universal	18000+	4000 (3560)	45	4000	40
	PAR38	ADMedSkt	68843	H44GS-100SP	H44/0	12	SP	8°		Universal	16000	2500 (1950)	20	5900	25
		E26Med Skt	68846	H44GS-100/MDSKSP	H44/0	12	SP	8°		Universal	16000	2500 (1950)	20	5900	25
	ET23.5	E39Mogul	69408	H38JA-100/DX	H38/0	20			Coated	Universal	24000+	4100 (3300)	45	4000	41
175	ED28	E39Mogul	69444	H39KB-175	H39/0	6			Clear	Universal	24000+	7700 (7150)	22	5900	44
			69445	H39KC-175/DX	H39/0	6			Coated	Universal	24000+	8400 (6800)	45	4000	48
250	ED28	E39Mogul	69448	H37KC-250/DX	H37/0	6			Coated	Universal	24000+	12500 (10000)	45	4000	50
400	ED37	E39Mogul	69449	H33CD-400	H33/0	6			Clear	Universal	24000+	20000 (18700)	22	5900	50
			69450	H33GL-400/DX	H33/0	6			Coated	Universal	24000+	23000 (16200)	43	4000	58
1000	BT56	E39Mogul	69331	H36GW-1000/DX	H36/0	6			Coated	Universal	24000+	58000 (48500)	45	4000	58

[1] Mean lumens are measured on ANSI reference circuits at rated wattage at 40% of average rated life except for those lamps with a "+" next to their life rating; these lamps are measured at 50% of average rated life.

Low Pressure Sodium SOX Lamps

See product information bulletin (HID051) for product details

Watts	Bulb	Base	Product Number	Ordering Abbreviation	ANSI Code/ Fixture Req.	Pkg Qty	Lamp Finish	Operating Position	Avg Rated Life (hrs)	Approx Lumens Initial (Mean)	CCT (K)	Lamp Efficacy (LPW)
18	T17	BY22d	69510	SOX18	L69/E	12	Clear	BU	18000	1800 (1620)	1700	100
35	T17	BY22d	69511	SOX35 Plus	L70/E	12	Clear	BU	18000	4550 (4095)	1700	130
55	T17	BY22d	69512	SOX55	L71/E	12	Clear	BU	18000	7800 (6735)	1700	142
90	T21	BY22d	69513	SOX90 Plus	L72/E	12	Clear	HOR	18000	14300 (12155)	1700	159
135	T21	BY22d	69514	SOX135 Plus	L73/E	12	Clear	HOR	18000	22600 (19210)	1700	167
180	T21	BY22d	69519	SOX1806PK	L74/E	6	Clear	HOR	18000	32000 (22400)	1700	178

NOTES:

MANUFACTURERS' CROSS REFERENCE

HIGH INTENSITY DISCHARGE LAMPS

OSRAM SYLVANIA	PHILIPS	GE
METALARC® POWERBALL® EL ECOLOGIC®		
MCP24EL/PAR30LN/U/828/SP10/ECO	–	–
MCP24EL/PAR30LN/U/828/NFL25/ECO	–	–
MCP24EL/PAR30LN/U/828/FL30/ECO	–	–
MCP24EL/PAR30LN/U/828/FL40/ECO	–	–
POWERBALL® CERAMIC METALARC® PAR ECOLOGIC®		
MCP20PAR20/U/830/FL/ECO PB	CDM20/PAR20/M/FL/3K/ALTO	CMH20PAR20/FL
MCP20PAR30LN/U/830/SP/ECOPB	CDM20/PAR30L/M/SP/3K/ALTO	CMH20PAR30/SP10
MCP20PAR30LN/U/830/FL/ECOPB	CDM20/PAR30L/M/FL/3K/ALTO	CMH20PAR30/FL25
MCP39PAR20/U/830/SPPB	CDM35/PAR20/M/SP/3K/ALTO	CMH39UPAR20SP10
MCP39PAR20/U/830/FLPB	CDM35/PAR20/M/FL/3K/ALTO	CMH39UPAR20FL25
MCP39PAR30LN/U/940/SP/ECO	–	CMH39PAR30LNSP4K
MCP39PAR30LN/U/830/FL/ECOPB	CDM35/PAR30L/M/FL/3K/ALTO	CMH39PAR30L/FL25
MCP70PAR30LN/U/930/SP/ECOPB	CDM70/PAR30L/M/SP/3K/ALTO	CMH70PAR30L830SP
MCP70PAR30LN/U/930/FL/ECOPB	CDM70/PAR30L/M/FL/3K/ALTO	CMH70PAR30L830FL
MCP70PAR38/U/830/SP/ECOPB	CDM70/PAR38/SP/3K/ALTO	CMH70PAR38SP/ECO
MCP70PAR38/U/830/FL/ECOPB	CDM70/PAR38/FL/3K/ALTO	CMH70PAR38FL/ECO
MCP70PAR38/U/VWFL/830/ECOPB	----	CMH70PAR38WF/ECO
MCP100PAR38/U/830/SP/ECOPB	CDM100/PAR38/SP/3K/ALTO	CMH100PAR38SPECO
MCP100PAR38/U/830/FL/ECOPB	CDM100/PAR38/FL/3K/ALTO	CMH100PAR38FLECO
MCP100PAR38/U/830/VWFL/ECOPB	–	CMH100PAR38WFECO
MCP150/PAR38/U/830/SP/ECOPB	–	–
MCP150/PAR38/U/830/FL/ECOPB	–	–

HIGH INTENSITY DISCHARGE LAMPS

OSRAM SYLVANIA	PHILIPS	GE
POWERBALL® CERAMIC METALARC® TUBULAR SINGLE-ENDED		
MC15TF/U/GU6.5/830	–	–
MC20TF/U/GU6.5/830	CDM20/TM/830	CMH20T/U830GU6.5
MC39TF/U/GU6.5/830	CDM35/TM/930	CMH39T/U930GU6.5
MC20TC/U/G8.5/830PB	CDM20/TC/830	CMH20TC/U830G8.5
MC39TC/U/G8.5/830PB	CDM35/TC/830	CMH39TCUVCU830G8
MC70TC/U/G8.5/930PB	CDM70/TC/830	CMH70TCU830G8.5
MC39T6/U/G12/930	–	–
MC39T6/U/G12/830PB	CDM Elite 35/T6/930	–
MC39T6/U/G12/940PB	CDM35/T6/842	CMH39T/U/942/G12
MC70T6/U/G12/940PB	CDM70/T6/942	CMH70TU/942/G12
MC70T6/U/G12/930PB	CDM Elite 70/T6/930	CMH70U930G12ULR
MC70T6/U/G12/830PB	CDM70/T6/830	CMH70TU/830/G12
MC100T6/U/G12/830	–	–
MC150T7.5/U/G12/940PB	CDM150/T6/942	CMH150TU/942/G12
MC150T7.5/U/G12/830	CDM150/T6/830	CMH150TU/830/G12
POWERBALL® CERAMIC METALARC® TUBULAR DOUBLE-ENDED		
MC70T6/DE/830PB	CDM70/TD/830	CMH70/TD/830RX7S
MC150T7.5/DE/830PB	CDM150/TD/830	CMH150TD830RX7S
MC200/U/ET18/940		
POWERBALL® CERAMIC METALARC®		
MC70/U/MED/830	MHC70/U/M/3K/ALTO	CMH70/U/830/MED
MC100/U/MED/830	MHC100/U/M/3K ALTO	CMH100/U/830/MED
MC150/U/MED/830	MHC150/U/M/3K/ALTO	–
MC100/U/ET23.5/942	CDM100/U/PS/4K	–
MC150/U/ET23.5/942	CDM150/U/PS/4K	–
MCP50/U/MED/830PB	MHC50/U/MP/3K/ALTO	–
MCP50/C/U/MED/830PB	–	–
POWERBALL® CERAMIC METALARC PRO-TECH®		
MCP70/U/MED/940PB	MHC70/U/MP/4K/ALTO	CMH70U942MED/O
MCP70/C/U/MED/940PB	MHC70/C/U/MP/4K/ALTO	CMH70CU942MED/O
MCP70/U/MED/830PB	MHC70/U/MP/3K/ALTO	CMH70U830MED/O
MCP70/C/U/MED/830PB	MHC70/C/U/MP/3K/ALTO	CMH70CU830MED/O
MCP100/U/MED/940PB	MHC100/U/MP/4K/ALTO	–
MCP100/C/U/MED/940PB	MHC100/C/U/MP/4K/ALTO	–
MCP100/U/MED/830PB	MHC100/U/MP/3K/ALTO	–
MCP100/C/U/MED/830PB	MHC100/C/U/MP/3K/ALTO	–
MCP150/U/MED/830PB	MHC150/U/MP/3K/ALTO	CMH150U830MED/O
MCP150/C/U/MED/830PB	MHC150/C/U/MP/3K/ALTO	CMH150CU830MED/O
MCP200/PS/BU-ONLY/940	–	–
MCP250/PS/BU-ONLY/940PB	CDM250/V/O/PS/4K/ALTO	CMH250/V/PA/O
MCP250/C/PS/BU-ONLY/940PB	CDM250/C/V/O/PS/4K/ALTO	CMH250/C/V/PA/O
MCP320/PS/BU-ONLY/840PB	–	CMH320/V/PA/O
MCP320/C/PS/BU-ONLY/840PB	–	CMH320/C/V/PA/O

MANUFACTURERS' CROSS REFERENCE

HIGH INTENSITY DISCHARGE LAMPS

OSRAM SYLVANIA	PHILIPS	GE
METALARC® PULSE START		
M70/U/MED	–	MVR70/U/MED
M100/U/MED	–	MVR100/U/MED
M150/U/MED	–	MVR150/U/MED
MS175/PS/BU-ONLY/MED	MS175/M/BU/PS	MVR175/VBU/MEDPA
MS175/C/PS/BU-ONLY/MED	–	MVR175/CVBUMEDPA
M175/PS/U	–	–
MS175/PS/BU-ONLY	MS175/BU/PS	–
MS175/C/PS/BU-ONLY	MS175/C/BU/PS	–
MS200/PS/BU-ONLY/ET23.5	–	–
MS200/PS/BU-ONLY/BT28	–	–
MS200/C/PS/BU-ONLY/BT28	–	–
M250/PS/U	MS250/U/PS	MVR250/U/PA
MS250/PS/BU-ONLY	MS250/BU/PS	MVR250/VBU/PA
MS250/C/PS/BU-ONLY	–	MVR250/C/VBU/PA
MS320/PS/BU-HOR	MS320/U/PS	MVR320/VBU/HO/PA
MS320/C/PS/BU-HOR	MS320/C/U/PS	MVR320/C/VBUHOPA
M400/PS/U/BT28	–	–
MS400/PS/BD-ONLY/BT28	–	MVR400CVBUED28PA
MS400/PS/BU-ONLY/BT28	–	MVR400/VBUED28PA
M400/PS/U	MS400/U/PS	MVR400/U/PA
MS400/PS/BU-ONLY	MS400/BU/PS	MVR400/VBU/XHOPA
MS400/C/PS/BU-ONLY	MS400/C/BU/PS	MVR400/CVBUXHOPA
MS750/PS/BU-HOR/BT37	MS750/BU/BT37/PS	MVR750/VBU/PA
MS750/C/PS/BU-HOR/BT37	–	MVR750/C/VBU/PA
M1000/PS/U/BT37	MS1000/BU/BT37/PS	MVR1000U/BT37/PA
METALARC PRO-TECH® PULSE START		
MP50/U/MED	–	MXR50/U/MED/O
MP50/C/U/MED	–	MXR50/C/U/MED/O
MP70/U/MED	–	MXR70/U/MED/O
MP70/C/U/MED	–	MXR70/C/U/MED/O
MP100/U/MED	–	MXR100/U/MED/O
MP100/C/U/MED	–	MXR100/C/U/MED/O
MP150/U/MED	–	MXR150/U/MED/O
MP150/C/U/MED	–	MXR150/C/U/MED/O
MP250/C/PS/BU-ONLY	–	MPR250/C/VBU/O
MP250/PS/BU-ONLY	MP250/BU/PS	MPR250/VBU/O
MP320/350/PS/BU-ONLY/BT28	–	MPR320/C/PA/ED28
MP320/350/C/PS/BU-ONLY/BT28	–	–
MP350/400/PS/BU-ONLY	MP350/BU/PS	MPR350/VBU/PA
MP350/400/C/PS/BU-ONLY	MP350/C/BU/PS	MPR350/C/VBU/PA

HIGH INTENSITY DISCHARGE LAMPS

OSRAM SYLVANIA	PHILIPS	GE
METALARC PRO-TECH®		
MP175/BU-ONLY/MED	–	–
MP175/BU-ONLY	MP175/BU	MPR175/VBU/O
MP175/C/BU-ONLY	–	MPR175/C/VBU/O
MP250/BU-ONLY	MP250/BU	MPR250/VBU/O
MP250/C/BU-ONLY	–	MPR250/C/VBU/O
MP400/BU-ONLY	–	MPR400/VBU/HO/O
MP400/C/BU-ONLY	–	MPR400C/VBU/HO/O
MP1000/BU-ONLY	MP1000/BU	MPR1000/VBU/O
MP1000/C/BU-ONLY	–	–
METALARC® SUPER		
MS175/HOR	–	MVR175/HOR
MS250/HOR	–	MVR250/HOR
MS400/HOR/BT28	–	MVR400/HOR/BT28
MS400/HOR	–	MVR400/HOR/MOG
MS400/BU-ONLY	MS400/BU	MVR400/VBU/XHO
MS400/C/BU-ONLY	MS400/C/BU	MVR400/C/VBU/XHO
MS1000/BU-ONLY	MS1000/BU	MVR1000/VBU/HO
MS1000/C/BU-ONLY	MS1000/C/BU	MVR1000/C/VBU/HO
MS1000/BD-ONLY	–	–
METALARC® SUPERSAVER®		
M150/SS/U/BT28	–	MVR150/U/WM
MS360/SS/BU-HOR	MS360/BU/EW	MVR360/VBU/WM/HO
MS360/C/SS/BU-HOR	MS360/C/BU/EW	MVR360C/VBUWMXHO
MSP360/SS/BU-ONLY	MP360BU/EW	MPR360VBUWM/HO/O
MSP360/C/SS/BU-ONLY	MP360/C/BU/EW	MPR360CVBUWMHO/O
M950/SS/U/BT56	–	–
METALARC® STANDARD (Probe Start)		
M175/U/MED	MH175/U/M	MVR175/U/MED
M175/C/U/MED	MH175/C/U/M	MVR175/C/U/MED
M175/U	MH175/U	MVR175/U
M175/C/U	MH175/C/U	MVR175/C/U
M250/U/ET18	–	–
M250/U	MH250/U	MVR250/U
M250/C/U	MH250/C/U	MVR250/C/U
M400/U/ET18	–	–
M400/U/BT28	MH400/U/ED28	MVR400/U/ED28
M400/C/U/BT28	–	MVR400/C/U/ED28
M400/U	MH400/U	MVR400/U
M400/C/U	MH400/C/U	MVR400/C/U
M1000/U/BT37	MH1000/U/BT37	MVR1000/U/BT37
M1000/U	MH1000/U	MVR1000/U
M1000/C/U	MH1000/C/U	MVR1000/C/U
M1500/BU-HOR	–	MVR1500/HBU

MANUFACTURERS' CROSS REFERENCE

HIGH INTENSITY DISCHARGE LAMPS

OSRAM SYLVANIA	PHILIPS	GE
LUMALUX PLUS® AND LUMALUX PLUS® ECOLOGIC®		
LU50/PLUS/ECO	C50S68/ALTO NC HPS	–
LU70/PLUS/MED	–	–
LU70/PLUS/ECO	C70S62/ALTO NC HPS	LU70/ECO/NC
LU100/PLUS/MED	–	–
LU100/PLUS/ECO	C100S54/ALTO NC HPS	LU100/ECO/NC
LU150/55/PLUS/ECO	C150S55/ALTO NC HPS	LU150/55/ECO/NC
LU200/PLUS/ECO	C200S66/ALTO NC HPS	LU200/ECO/NC
LU250/PLUS/ECO	C250S50/ALTO NC HPS	LU250/ECO/NC
LU310/PLUS/ECO	–	–
LU400/PLUS/ECO	C400S51/ALTO NC HPS	LU400/ECO/NC
LU1000/PLUS	C1000S52/ALTO NC HPS	–
LU100/PLUS/XL/ECO	–	–
LU150/PLUS/XL/ECO	–	–
LUMALUX® STANDBY		
LU70/SBY	C70S62/2	LU70/SBY/XL
LU100/SBY	C100S54/2	LU100/SBY/XL
LU150/55/SBY	C150S55/2	LU150/55/SBY/XL
LU200/100/SBY	–	LU200/SBY/XL
LU250/SBY	C250S50/2	LU250/SBY/XL
LU400/SBY	C400S51/2	LU400/SBY/XL
LU1000/SBY[3]	C1000S52/2	LU1000/SBY/XL
PLANTASTAR®		
LU1000/PLANTASTAR	C1000S52/AGROLITE XT	–
LUMALUX® STANDARD AND LUMALUX® ECOLOGIC®		
LU50/ECO	C50S68/ALTO	LU50/H/ECO
LU50/D	C50S68/D/ALTO	LU50/D/H/E/CO
LU70/ECO	C70S62/ALTO	LU70/H/ECO
LU70/D	–	LU70/D/H/ECO
LU100/ECO	C100S54/ALTO	LU100/H/ECO
LU100/D	–	LU100/D
LU150/55/ECO	C150S55/ALTO	LU150/55/H/ECO
LU150/55/D	–	–
LU150/100	C150S56/ALTO	–
LU200/ECO	C200S66/ALTO	LU200/H/ECO
LU250/ECO	C250S50/ALTO	LU250/H/ECO
LU250/D	–	LU250/D
LU310/ECO	–	LU310
LU400/ECO	C400S51/ALTO	LU400/H/ECO
LU400T7/RSC	–	LU400/TD
LU750	–	LU750
LU1000/ECO	C1000S52/ALTO	LU1000/ECO
LU35/MED	C35S76/M	LU35/MED
LU50/MED	C50S68/M	LU50/MED
LU50/D/MED	C50S68/D/M	LU50/D/MED
LU70/MED	C70S62/M	LU70/MED
LU70/D/MED	C70S62/D/M	LU70/D/MED
LU100/MED	C100S54/M	LU100/MED
LU150/55/MED	C150S55/M	LU150/MED
LU150/55/D/MED	C150S55/D/M	LU150/D/MED

HIGH INTENSITY DISCHARGE LAMPS

OSRAM SYLVANIA	PHILIPS	GE
METALARC BRITELINE®		
M1500T7/DE	–	SPL1500/H/652
M1500T8/DE	–	–
M2000T8/DE	–	–
M2000T9/DE	–	MQI/2000/T9/40
HQI® FIBER-OPTIC INTEGRATED DICHROIC REFLECTOR		
HQI-R150/NDX/FO	–	–
MERCURY VAPOR		
H43AV-75/DX	H43AV-75/DX	HR75DX43
H38AV-100/DX	H38MP-100/DX	HR100DX38/MED
H44GS-100SP	–	–
H44GS-100/MDSKSP	–	–
H38JA-100/DX	H38JA-100/DX	HR100DX38
H39KB-175	H39KB-175	HR175A39
H39KC-175/DX	H39KC-175/DX	HR175DX39
H37KC-250/DX	H37KC-250/DX	HR250DX37
H33CD-400	–	HR400A33
H33GL-400/DX	H33GL-400/DX	HR400DX33
H36GW-1000/DX	H36GW-1000/DX	HR1000DX36
LOW PRESSURE SODIUM		
SOX18	SOX-E18	SOX18
SOX35 Plus	SOX35	SOX35
SOX55	SOX55	SOX55
SOX90 Plus	SOX90	SOX90
SOX135 Plus	SOX135	SOX135
SOX1806PK	SOX180	–

OPEN FIXTURE RATED, METALARC® POWERBALL® EL INTEGRATED PAR30LN, O-TYPE LAMP

R **⚠ WARNING**

ANSI Luminaire Code O
OPEN FIXTURE Permissible

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. **ULTRAVIOLET RADIATION EXPOSURE – WARNING:** This lamp can cause serious skin burns and eye inflammation from shortwave ultraviolet radiation if the outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes, unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available. This product conforms to the following federal regulations: USA: 21 CFR 1040.30 and CANADA: SOR/80-381.

II. **RUPTURE RISKS:** This Metal Halide lamp is constructed of an outer glass bulb with an internal arc-tube. Metal Halide arc-tubes operate at high pressure and at very high temperatures and can unexpectedly rupture due to internal causes or external factors such as a ballast failure or misapplication. An arc-tube rupture can burst and shatter the outer glass bulb resulting in the discharge of glass fragments and extremely hot particles. In the event of such rupture, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

III. **LAMP OPERATING INSTRUCTIONS – CAUTION: TO REDUCE THE RISKS** OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC TUBE RUPTURE THE FOLLOWING LAMP OPERATING INSTRUCTIONS MUST BE FOLLOWED:

1. **Re-lamp fixture at or before the end of rated life.** Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture. (See catalog for rated life.)
2. Only operate with compatible fixture at 120V input.
3. This lamp is not intended for use with emergency fixtures or emergency exit lights.
4. Do not operate with an external ballast as ballast is integrated into the lamp.
5. Do not use with dimmers. Do not use on electronic timers, photocells, lighted switches or any other switches that do not meet UL20 Sec. 7.6.15.
6. Before lamp installation or replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
7. **Do not use lamp if lens, reflector or housing is visibly damaged.**
8. **Do not use in totally enclosed, recessed fixture.**
9. Protect lamp, lamp socket and wiring against moisture, corrosive atmosphere and excessive heat.
10. Suitable for dry and damp locations. Risk of electric shock – Do not use where directly exposed to water.
11. Time should be allowed for lamp color to stabilize when turned on for the first time. All lamp ratings are based on 100 hours of operation. Movement or vibration may cause variation in color and appearance.
12. Lamps may require 10-15 minutes to re-light if there is a loss of power to the socket.
13. Take care in handling and disposing of this lamp. If arc-tube is broken, avoid skin contact with any of the contents and fragments. See Product Safety Data Sheet for further details.
14. This product complies with the requirements of FCC 47 CFR §18 non-consumer. This product may cause interference with radios, televisions, wireless telephones and remote controls. If interference occurs, move the product away from these devices or plug into a different outlet. Do not install this near maritime safety communications equipment or other critical navigation or communications equipment operating between 0.45-30 MHz. For additional product information, call 1-800-LIGHTBULB (1-800-544-4828).
15. This Class A RFLD complies with the Canadian standard ICES-005.

IV. **NOTES:**

1. This lamp is intended for use in open fixtures since it was designed to contain a ruptured arc-tube and thereby minimize the resultant risks of personal injury, property damage, burns and fire.
2. **This lamp contains an arc tube with a fill gas containing less than 10 nCi of Kr-85 and is distributed by OSRAM SYLVANIA Products Inc. 100 Endicott St. Danvers, MA 01923.**

ENCLOSED FIXTURE RATED, METALARC® POWERBALL® CERAMIC TUBULAR SINGLE- AND DOUBLE-ENDED LAMPS WITH G12, G8.5, G6.5 & RX7S BASES, UV-FILTER OUTER JACKET, E-TYPE LAMP

R **⚠ WARNING**

ANSI Luminaire Code E
ENCLOSED FIXTURE

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. **RUPTURE RISKS:** This Metal Halide lamp is constructed of a UV-attenuating outer quartz bulb with an internal ceramic arc tube. Metal Halide arc tubes operate at high pressure and at very high temperatures and can unexpectedly rupture due to internal causes or external factors such as a ballast failure or misapplication. An arc tube rupture can burst and shatter the outer glass bulb resulting in the discharge of glass fragments and extremely hot particles. In the event of such rupture, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

TO REDUCE THESE RISKS:

1. **Only operate lamp in an enclosed fixture with a lens/diffuser material able to contain hot lamp fragments (up to 2192°F, 1200°C for a ceramic arc tube and 2012°F, 1100°C for quartz). If you are uncertain, contact your fixture manufacturer.**
2. **Only operate lamp with compatible ballast and fixture. (See catalog for specific information.)**
3. **Only operate lamp in designated operating positions. (See catalog for illustration.)**
4. **Lamp must be turned off for a minimum of fifteen minutes at least once a week.**
5. **Never expose operating lamp to moisture (such as rain, sleet or snow).**
6. **Replace lamp if outer glass bulb is scratched, cracked or damaged in any way.**
7. **Electrically insulate any metal support in contact with the outer bulb to avoid glass decomposition.**
8. **Replace lamp at or before the end of rated life. (See catalog for rated life.)**

II. **ELECTRICAL SHOCK AND BURN HAZARD:** Do not remove or insert lamp while power is on. If outer glass bulb is broken, shut off power immediately and remove lamp after it has cooled.

III. **ULTRAVIOLET RADIATION EXPOSURE:**
WARNING: This lamp can cause serious skin burns and eye inflammation from shortwave ultraviolet radiation if the outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available. This product conforms to the following federal regulations: USA: 21 CFR 1040.30 and CANADA: SOR/80-381.

IV. **LAMP INSTALLATION:**
1. Ensure that lamp is securely seated in the socket.
2. If lamp is touched with bare hands, clean fingerprints off with alcohol and wipe dry with clean, lint-free cloth.
3. All sockets must be rated to withstand the maximum pulse voltage output of the ballast.
4. Never install the lamp into an ordinary household socket or a fixture intended for tungsten halogen lamps.

V. **BROKEN ARC TUBE:** Take care in handling and disposing of this lamp. If arc tube is broken, avoid skin contact with any of the contents and fragments. See Product Safety Data Sheet for further details.

ENCLOSED FIXTURE RATED METALARC®, E-TYPE LAMP

R **⚠ WARNING**

ANSI Luminaire Code E
ENCLOSED FIXTURE

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. **RUPTURE RISKS:** This Metal Halide lamp is constructed of a UV-attenuating outer quartz bulb with an internal arc-tube. Metal Halide arc-tubes operate at high pressure and at very high temperatures and can unexpectedly rupture due to internal causes or external factors such as a ballast failure or misapplication. An arctube rupture can burst and shatter the outer glass bulb resulting in the discharge of glass fragments and extremely hot particles. In the event of such rupture, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

TO REDUCE THESE RISKS:

1. **Only operate lamp in an enclosed fixture with a lens/diffuser material able to contain hot lamp fragments (up to 2192°F, 1200°C for a ceramic arc tube and 2012°F, 1100°C for quartz). If you are uncertain, contact your fixture manufacturer.**
2. **Only operate lamp with compatible ballast and fixture. (See catalog for specific information.)**
3. **Only operate lamp in designated operating positions. (See catalog for illustration.)**
4. **Lamp must be turned off for a minimum of fifteen minutes at least once a week.**
5. **Never expose an operating lamp to moisture (such as rain, sleet or snow).**
6. **Replace lamp if outer glass bulb is scratched, cracked or damaged in any way.**
7. **Electrically insulate any metal support in contact with the outer bulb to avoid glass decomposition.**
8. **Replace lamp at or before the end of rated life. (See catalog for rated life.)**

FOR APPLICATIONS WHERE AN ADDITIONAL MEASURE OF SAFETY IS DESIRED, LAMPS USING AN INTERNAL SHIELD DESIGNED TO CONTAIN AN ARC-TUBE RUPTURE ARE AVAILABLE.

II. **ELECTRICAL SHOCK AND BURN HAZARD:** Do not remove or insert lamp while power is on. If outer glass bulb is broken, shut off power immediately and remove lamp after it has cooled.

III. **ULTRAVIOLET RADIATION EXPOSURE:**
WARNING: This lamp can cause serious skin burns and eye inflammation from shortwave ultraviolet radiation if the outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available. This product conforms to the following federal regulations: USA: 21 CFR 1040.30 and CANADA: SOR/80-381.

IV. **LAMP INSTALLATION:**
1. Screw lamp firmly but not forcibly into socket to avoid breakage.
2. All horizontal lamps with position oriented mogul (POM) bases (with locating pin) require a POM socket. Do not remove pin from base.
3. All pulse start lamps require a socket rated to withstand a 4000 volt pulse.
4. Never install the lamp into an ordinary household socket.

V. **BROKEN ARC TUBE:** Take care in handling and disposing of this lamp. If arc-tube is broken, avoid skin contact with any of the contents and fragments. See Product Safety Data Sheet for further details.

OPEN FIXTURE RATED, METALARC® PRO-TECH®, O-TYPE LAMP

R **⚠ WARNING**

ANSI Luminaire Code O
OPEN FIXTURE permissible

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. **RUPTURE RISKS:** This Metal Halide lamp is constructed of an outer glass bulb with an internal arc-tube. Metal Halide arc-tubes operate at high pressure and at very high temperatures and can unexpectedly rupture due to internal causes or external factors such as a ballast failure or misapplication. An arc-tube rupture can burst and shatter the outer glass bulb resulting in the discharge of glass fragments and extremely hot particles. In the event of such rupture, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

TO REDUCE THESE RISKS:

1. **Only operate with compatible ballast and fixture. (See catalog for specific information.)**
2. **Only operate lamp in designated operating positions. (See catalog for illustration.)**
3. **Lamp must be turned off for a minimum of fifteen minutes at least once a week.**
4. **Never expose operating lamp to moisture (such as rain, sleet or snow).**
5. **Replace lamp if outer glass bulb is scratched, cracked or damaged in any way.**
6. **Electrically insulate any metal support in contact with the outer glass bulb to avoid glass decomposition.**
7. **Replace lamp at or before the end of rated life. (See catalog for rated life.)**

This lamp is intended for use in open fixtures since it contains a special shield which was designed to contain a ruptured arc-tube and thereby minimize the resultant risks of personal injury, property damage, burns and fire. In applications where an additional measure of safety is desired, an enclosed fixture may be used with a lens/diffuser material able to contain hot lamp fragments (up to 2192°F, 1200°C for a ceramic arc tube and 2012°F, 1100°C for quartz). If you are uncertain, contact your fixture manufacturer.

II. **ELECTRICAL SHOCK AND BURN HAZARD:** Do not remove or insert lamp while power is on. If outer glass bulb is broken, shut off power immediately and remove lamp after it has cooled.

III. **ULTRAVIOLET RADIATION EXPOSURE:**
WARNING: This lamp can cause serious skin burns and eye inflammation from shortwave ultraviolet radiation if the outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available. This product conforms to the following federal regulations: USA: 21 CFR 1040.30 and CANADA: SOR/80-381.

IV. **LAMP INSTALLATION:**
1. Screw lamp firmly but not forcibly into socket to avoid breakage.
2. All pulse start lamps require a socket rated to withstand a 4000 volt pulse.
3. Never install the lamp into an ordinary household socket.

V. **BROKEN ARC TUBE:** Take care in handling and disposing of this lamp. If arc-tube is broken, avoid skin contact with any of the contents and fragments. See Product Safety Data Sheet for further details.

METALARC®, S-TYPE LAMP

R **⚠ WARNING**

ANSI Luminaire Code S
ENCLOSED FIXTURE/Open if meets requirement of Paragraph I.1 below

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. **RUPTURE RISKS:** This Metal Halide lamp is constructed of an outer glass bulb with an internal arc-tube. Metal Halide arc-tubes operate at high pressure and at very high temperatures and can unexpectedly rupture due to internal causes or external factors such as a ballast failure or misapplication. An arc-tube rupture can burst and shatter the outer glass bulb resulting in the discharge of glass fragments and extremely hot particles. In the event of such rupture, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

TO REDUCE THESE RISKS:

1. **Only operate lamp in an enclosed fixture with a lens/diffuser material able to contain hot lamp fragments (up to 2012°F, 1100°C). If you are uncertain, contact your fixture manufacturer. When operated within 15° of vertical, this lamp may be operated in an open fixture PROVIDED THE INSTALLATION IS NOT NEAR PEOPLE OR FLAMMABLE OR COMBUSTIBLE MATERIAL.**
2. **Only operate lamp with compatible ballast and fixture. (See catalog for specific information.)**
3. **Only operate lamp in designated operating positions. (See catalog for illustration.)**
4. **Lamp must be turned off for a minimum of fifteen minutes at least once a week.**
5. **Never expose an operating lamp to moisture (such as rain, sleet or snow).**
6. **Replace lamp if outer glass bulb is scratched, cracked or damaged in any way.**
7. **Electrically insulate any metal support in contact with the outer bulb to avoid glass decomposition.**
8. **Replace lamp at or before the end of rated life. (See catalog for rated life.)**

FOR APPLICATIONS WHERE AN ADDITIONAL MEASURE OF SAFETY IS DESIRED, LAMPS USING AN INTERNAL SHIELD DESIGNED TO CONTAIN AN ARC-TUBE RUPTURE ARE AVAILABLE.

II. **ELECTRICAL SHOCK AND BURN HAZARD:** Do not remove or insert lamp while power is on. If outer glass bulb is broken, shut off power immediately and remove lamp after it has cooled.

III. **ULTRAVIOLET RADIATION EXPOSURE:**
WARNING: This lamp can cause serious skin burns and eye inflammation from shortwave ultraviolet radiation if the outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available. This product conforms to the following federal regulations: USA: 21 CFR 1040.30 and CANADA: SOR/80-381.

IV. **LAMP INSTALLATION:**

1. Screw lamp firmly but not forcibly into socket to avoid breakage.
2. All horizontal lamps with position oriented mogul (POM) bases (with locating pin) require a POM socket. Do not remove pin from base.
3. All pulse start lamps require a socket rated to withstand a 4000 volt pulse.
4. Never install the lamp into an ordinary household socket.

V. **BROKEN ARC TUBE:** Take care in handling and disposing of this lamp. If arc-tube is broken, avoid skin contact with any of the contents and fragments. See Product Safety Data Sheet for further details.

METALARC® BRITELINE®, F-TYPE LAMP

⚠ WARNING

ANSI Luminaire Code F
ENCLOSED FIXTURE with UV Filter and lens interlock required

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. **RUPTURE RISKS:** This Metal Halide lamp is constructed with a quartz arc-tube which operates at high pressure and at very high temperatures. The arc-tube can unexpectedly rupture due to internal causes or external factors such as a ballast failure or misapplication resulting in the discharge of glass fragments and extremely hot particles. In the event of such rupture, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

TO REDUCE THESE RISKS:

1. **Only operate lamp in an enclosed fixture with a lens/diffuser material able to contain hot lamp fragments (up to 2012°F, 1100°C). If you are uncertain contact your fixture manufacturer.**
2. **Only operate lamp with compatible ballast and fixture.**
3. **Only operate lamp in horizontal position.**
4. **Lamp must be turned off for a minimum of fifteen minutes at least once a week.**
5. **Never expose operating lamp to moisture (such as rain, sleet or snow).**
6. **Replace lamp if bulb is scratched, cracked or damaged in any way.**
7. **Keep all metals at least 3 inches from the body of the arc tube to avoid glass decomposition.**
8. **Replace lamp at or before the end of rated life.**

II. **ULTRAVIOLET RADIATION HAZARD:**
THIS LAMP EMITS ULTRAVIOLET (UV) POWER DURING OPERATION AND IS IN RISK GROUP 3 PER ANSI-IESNA Rp-27.3-96. THIS LAMP CAN CAUSE SERIOUS SKIN BURNS AND EYE INJURY FROM SHORTWAVE ULTRAVIOLET RADIATION. **IT MUST** BE OPERATED IN AN ENCLOSED FIXTURE WHICH FILTERS OUT THE HARMFUL SHORTWAVE ULTRAVIOLET RADIATION. IF YOU ARE UNCERTAIN, CONTACT YOUR FIXTURE MANUFACTURER.

A power interlock device is required to automatically turn off the lamp if the fixture assembly is opened. It is strongly recommended that a power interlock device also turn off power to the lamp if the fixture lens is broken. If the fixture lens breaks and the lamp remains on, turn off power immediately and repair before reenergizing.

This lamp is to be used **ONLY** in a fixture specifically designed for use with this lamp and recommended for its use by the equipment manufacturer.

III. **ELECTRICAL SHOCK AND BURN HAZARD:** Do not remove or insert lamp while power is on. Allow lamp to cool before removing.

IV. **LAMP INSTALLATION:**
Do not remove lamp from package until ready for use and then handle only with clean cotton gloves. If lamp is handled, fingerprints, grease or oils may be removed from the bulb by wiping with alcohol. This will remove materials which cause whitish spotting (devitrification) and premature lamp failure. Dry lamp carefully with clean cotton cloth.

1. Install lamp without undue pressure.
2. Ensure that lamp electrical connections are secure and nothing is touching bulb.
3. All seal gaskets and wire insulation must be shielded from the UV radiation produced by this lamp.
4. Fixture wiring must have a temperature rating of 250°C and a minimum voltage rating of 600V RMS for all lamps except the 1500T7 lamp which must have a voltage rating of 1500V RMS.
5. For maximum performance, all double-ended lamps must be operated with the arc-tube tip up.

V. **BROKEN ARC TUBE:** Take care in handling and disposing of this lamp. If arc-tube is broken, avoid skin contact with any of the contents and fragments. See Product Safety Data Sheet for further details.

LUMALUX®, LUMALUX® / ECO®, LUMALUX PLUS® / ECO® AND LUMALUX® STANDBY LAMPS

⚠ WARNING

ANSI Luminaire Code O
OPEN FIXTURE Permissible

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. OPERATE WITH COMPATIBLE BALLAST AND FIXTURE ONLY:
This lamp must be operated in a fixture and ballast which has an ANSI designation identical to that found on the lamp outer glass bulb. (with the exception of the LU/PLUS on Cooper ignitor 220C173G11, which may have compatibility issues).

II. ELECTRICAL SHOCK AND BURN HAZARD: Do not remove or insert lamp while power is on. If outer glass bulb is broken, shut off power immediately and remove lamp after it has cooled.

III. INSTALLATION AND OPERATING INSTRUCTIONS:
See catalog for specific operating parameters.

1. A specially designed socket which is electrically rated to withstand a 4000 volt pulse is required for all High Pressure Sodium lamps except for the 750 and 1000 watt lamps which require a socket rated to withstand a 5000 volt pulse.
2. These lamps have a vacuum jacket and may implode if broken. For added safety, wear safety glasses and gloves when installing or removing lamps.
3. To avoid burn injury, allow lamp to cool before removing from fixture.
4. Screw lamp firmly but not forcibly into socket to avoid breakage.
5. Replace lamps at or before end of rated life. (See catalog for rated life.)
6. Never install it into an ordinary household socket.
7. This lamp may be operated in any position.

IV. PROPER CARE AND MAINTENANCE:
To reduce the possibility of a rupture and premature lamp failure:

1. Do not use with luminaires which would cause an excessive increase in arc-tube operating voltage.
2. Do not expose operating lamp to moisture (such as rain, sleet or snow).
3. Replace lamp if outer glass bulb has been scratched, cracked or damaged in any way.
4. Electrically insulate any metal support in contact with the outer glass bulb to avoid glass decomposition.

V. BROKEN ARC TUBE: Take care in handling and disposing of this lamp. If arc-tube is broken, avoid skin contact with any of the contents and fragments. See Product Safety Data Sheet for further details.

LUMALUX® DOUBLE-ENDED QUARTZ JACKETED LAMPS

⚠ WARNING

ANSI LUMINAIRE Code F
ENCLOSED FIXTURE with UV Filter and lens interlock required

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. **OPERATE WITH COMPATIBLE BALLAST AND FIXTURE ONLY:**
This lamp must be operated in a fixture and ballast which has an ANSI designation identical to that found on the lamp outer glass bulb.

II. **ULTRAVIOLET RADIATION HAZARD:** THIS LAMP EMITS ULTRAVIOLET (UV) POWER DURING OPERATION AND IS IN RISK GROUP 2 PER ANSI-IESNA Rp-27.3-96. THIS LAMP CAN CAUSE SERIOUS SKIN BURNS AND EYE INJURY FROM SHORTWAVE ULTRAVIOLET RADIATION. IT **MUST** BE OPERATED IN AN ENCLOSED FIXTURE WHICH FILTERS OUT THE HARMFUL SHORTWAVE ULTRAVIOLET RADIATION. IF YOU ARE UNCERTAIN, CONTACT YOUR FIXTURE MANUFACTURER.

A power interlock device is required to automatically turn off the lamp if the fixture assembly is opened. It is strongly recommended that a power interlock device also turn off power to the lamp if the fixture lens is broken. If the fixture lens breaks and the lamp remains on, turn off power immediately and repair before reenergizing.

This lamp is to be used **ONLY** in a fixture specifically designed for use with this lamp and recommended for its use by the equipment manufacturer.

III. **ELECTRICAL SHOCK AND BURN HAZARD: Do not remove or insert lamp while power is on. Allow lamp to cool before removing.**

IV. **LAMP INSTALLATION AND FIXTURE:**
Do not remove lamp from package until ready for use and then handle only with clean cotton gloves. If lamp is handled, fingerprints, grease or oils may be removed from the bulb by wiping with alcohol. This will remove materials which cause whitish spotting (devitrification) and premature lamp failure. Dry lamp carefully with clean cotton cloth.

1. Install lamp without undue pressure.
2. Ensure that lamp electrical connections are secure and nothing is touching bulb.
3. All seal gaskets and wire insulation must be shielded from the UV radiation produced by this lamp.
4. Fixture wiring must have a temperature rating of 250ºC and a minimum voltage rating of 600V RMS.
5. Never install it into a fixture designed for use with tungsten halogen lamps.
6. Do not expose operating lamp to moisture (such as rain, sleet or snow).
7. Replace lamp if outer glass bulb has been scratched, cracked or damaged in any way.

V. **BROKEN ARC-TUBE:** Take care in handling and disposing of this lamp. If arc-tube is broken, avoid skin contact with any of the contents and fragments. See Product Safety Data Sheet for further details.

STANDARD MERCURY “R” LAMPS

R ⚠ WARNING

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. **RUPTURE RISKS:** This Mercury lamp is constructed of an outer glass bulb with an internal arc-tube made of quartz. Mercury arc-tubes operate at high pressure and at very high temperatures and can unexpectedly rupture due to internal causes or external factors such as a ballast failure or misapplication. An arc-tube rupture can burst and shatter the outer glass bulb resulting in the discharge of glass fragments and extremely hot quartz particles. In the event of such rupture, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE.**

TO REDUCE THESE RISKS:

1. **Only operate lamp with compatible ballast and fixture. (See catalog for specific information.)**
2. **Fixture lens/diffuser material must be able to contain hot lamp fragments (as high as 1832ºF, 1000ºC). If you are uncertain, contact your fixture manufacturer.**
3. **Never expose an operating lamp to moisture (such as rain, sleet or snow).**
4. **Replace lamp if outer glass bulb is scratched, cracked or damaged in any way.**
5. **Electrically insulate any metal support in contact with the outer bulb to avoid glass decomposition.**
6. **Replace lamp at or before the end of rated life. (See catalog for rated life.)**

II. **ELECTRICAL SHOCK AND BURN HAZARD:** Do not remove or insert lamp while power is on. If outer glass bulb is broken, shut off power immediately and remove lamp after it has cooled.

III. **ULTRAVIOLET RADIATION EXPOSURE:**
WARNING: THIS LAMP CAN CAUSE SERIOUS SKIN BURNS AND EYE INFLAMMATION FROM SHORTWAVE ULTRAVIOLET RADIATION IF THE OUTER ENVELOPE OF THE LAMP IS BROKEN OR PUNCTURED. DO NOT USE WHERE PEOPLE WILL REMAIN FOR MORE THAN A FEW MINUTES UNLESS ADEQUATE SHIELDING OR OTHER SAFETY PRECAUTIONS ARE USED. LAMPS THAT WILL AUTOMATICALLY EXTINGUISH WHEN THE OUTER ENVELOPE IS BROKEN OR PUNCTURED ARE COMMERCIALLY AVAILABLE. THIS PRODUCT CONFORMS TO THE FOLLOWING FEDERAL REGULATIONS:
USA: 21 CFR 1040.30 AND CANADA: SOR/80-381.

IV. **INSTALLATION:**
1. Screw lamp firmly but not forcibly into socket to avoid breakage.
2. To avoid damaging a lamp, never install it into an ordinary household socket.
3. This lamp may be operated in any position.

V. **BROKEN ARC-TUBE:** Take care in handling and disposing of this lamp. If arc-tube is broken, avoid skin contact with any of the contents and fragments. See Product Safety Data Sheet for further details.

SOX LAMPS

R **⚠ WARNING**

THE FOLLOWING INSTRUCTIONS MUST BE COMPLIED WITH TO AVOID RISK OF PERSONAL INJURY, PROPERTY DAMAGE AND POOR LAMP PERFORMANCE.

I. BURNS AND FIRE HAZARD:

Sox lamps contain a quantity of sodium which may heat from a reaction with moisture in the air or on the skin if a lamp is broken. Hot sodium will burn spontaneously when exposed to the air. Sodium lamps must be packed, shipped and stored in the wrapping provided to reduce the risk of breakage.

II. IMPLOSION HAZARD:

Always wear safety glasses when handling lamp. Low pressure sodium lamps are made of glass and are evacuated and could therefore implode if damaged or handled incorrectly. Replace lamp if outer glass bulb has been scratched, cracked or damaged in any way. To reduce the possibility of a lamp cracking or breaking, do not expose operating lamp to rain, snow or water.

III. ELECTRICAL SHOCK AND BURN HAZARD:

Do not remove or insert lamp when power is on. If outer glass bulb is broken, shut off power immediately and remove lamp after it has cooled.

IV. OPERATE WITH COMPATIBLE BALLAST AND FIXTURE ONLY:

This lamp must be operated in a fixture and ballast which was specifically designed for use with this lamp.

V. INSTALLATION AND OPERATING INSTRUCTIONS:

1. When operated in other than the base up orientation, single-based “SOX” lamps from 35 watts to 180 watts must be supported at the end opposite to the base in such a way as to allow for thermal expansion and contraction along the lamp axis.
2. Install lamp firmly but not forcibly into socket to avoid breakage.
3. For maximum system performance, replace lamp at or before end of rated life. (See catalog for rated life.)
4. Only operate lamps in designated operating positions. (See catalog for illustration.)

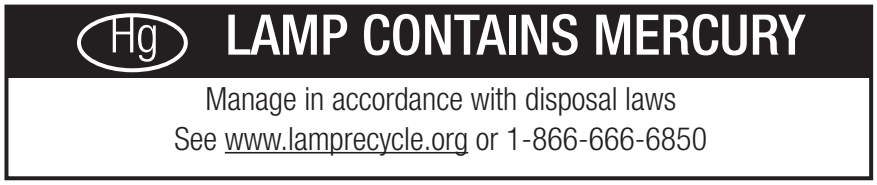
VI. LAMP DISPOSAL:

To avoid the risk of personal injury or property damage from sodium reaction when disposing of spent lamps, the following procedure should be followed:

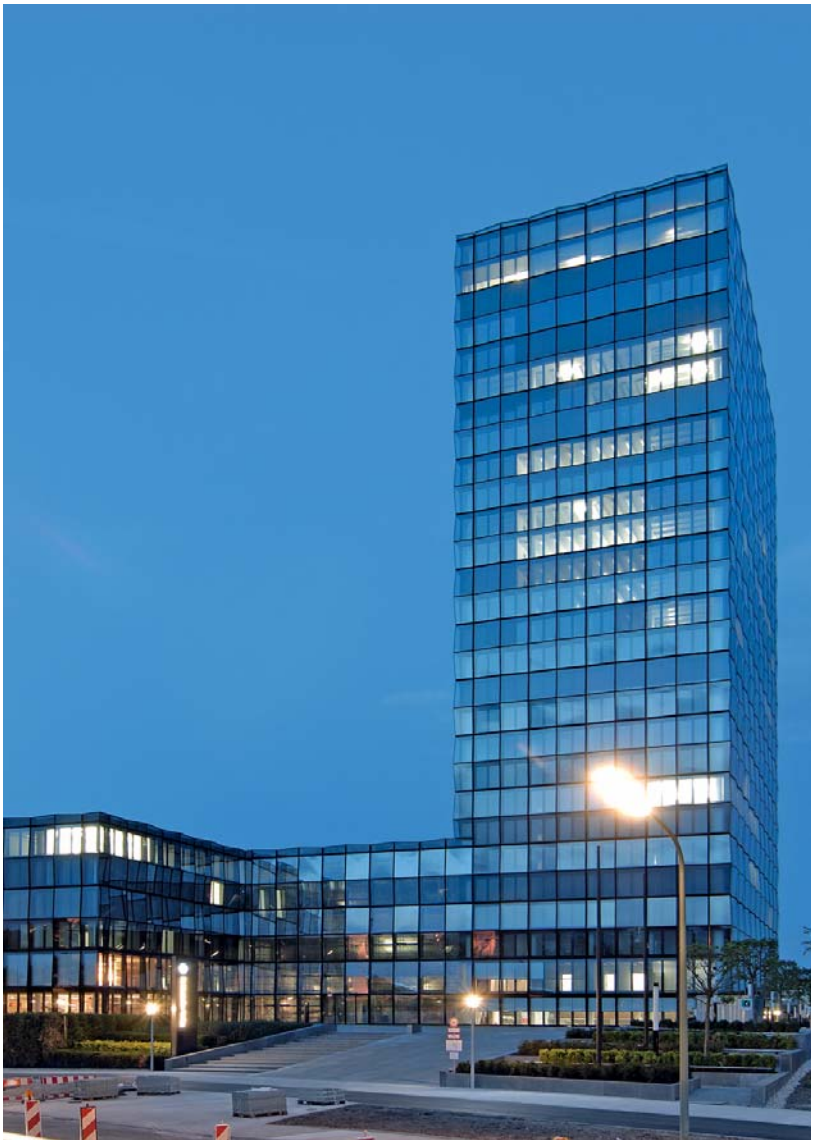
1. Before commencing, operator must be outfitted with appropriate OSHA-approved face mask, gloves and apron.
2. Place no more than 20 lamp(s) in a large, dry container. (Do not exceed one-quarter of the container height.)
3. Break lamp(s) into small pieces inside the container in a dry atmosphere and in a well ventilated area.
4. From a safe distance, carefully pour enough tap water into container to cover all materials.
5. After a few minutes, the reaction of the sodium with the large quantity of water will produce a mild sodium hydroxide solution which may be disposed of in accordance with applicable federal, state and local regulations.

LAMP DISPOSAL LABELING

The following information appears on the packages of high intensity discharge lamps that contain mercury.



For weight and measure information, please visit www. sylvania.com.
For more information about HID lamp warranties, please visit the warranty section of this catalog.



Ballast

Table of Contents

New Global OSRAM Branding for QUICKTRONIC® Electronic Ballast

SYLVANIA branded ballasts are transitioning to the OSRAM brand to better serve our customers globally. The transition has already started and is expected to take 6 to 12 months. The same high-quality, QUICKTRONIC electronic ballasts will be manufactured and sold through the normal distribution channels.

The System "continues" to be the Solution

OSRAM SYLVANIA is the global leader in lighting systems. Our global network of design and manufacturing brings ballast and lamp knowledge together to produce innovative and cost-effective energy-saving systems. We offer both instant and programmed rapid start ballasts ranging from high to extreme low-ballast factors, as well as a full line of controllable ballasts. OSRAM SYLVANIA has an electronic lamp and ballast system to meet all your needs. The industry's original and most comprehensive system warranty, the QUICK 60+® System Warranty covers the OSRAM QUICKTRONIC ballasts and the SYLVANIA lamps they power.

High Efficiency Electronic Ballast Offering

High efficiency ballasts save up to an additional 6% over standard electronic ballasts. Our OSRAM QUICKTRONIC QHE product line includes:

- QUICKTRONIC Instant Start and PROStart® T8
- QUICKTRONIC PROStart T5 and T5HO
- QUICKTRONIC Instant Start DL
- QUICKTRONIC High Intensity Discharge DIM
- QUICKTRONIC QUICKSTEP®, POWERSENSE,® and DALI T5, T5HO, T8
- QUICKTRONIC PowerSHED™ Instant Start and Relay

For information on the entire OSRAM QUICKTRONIC product offerings go to http://www.sylvania.com/en-us/products/ballasts

The system is the solution

OSRAM SYLVANIA is the global leader in lighting systems. One of the significant trends in lighting technology is the move toward optimized lamp and ballast systems...we've been at the forefront with the system solution®, a family of ideally designed energy saving lamps and electronic ballast combinations. OSRAM has the competitive advantage with years of experience in designing, developing and supporting integrated systems — both in ballasts and lamps. Our global network of design and manufacturing brings ballast and lamp knowledge together to produce innovative and cost-effective energy saving systems.

- Committed to providing energy efficient ballasts & lamps
- Innovative system solutions that exceed customer expectations
- These systems are covered by the QUICK 60+® warranty, the first and most comprehensive system warranty in the industry

It's the system solution, only from SYLVANIA.

the system solution®

QUICKTRONIC® High Efficiency

The High Efficiency Series features energy-saving electronic T8 ballasts that save up to an additional 6% (2 to 5 watts) over standard electronic ballasts. Features also include <10% THD and Universal Voltage.

- High Efficiency Systems over 90% efficient (maximize energy savings)
- Up to 60% savings
- Over 100 LPW (lumens/watt) with OCTRON® SUPERSAVER® lamps
- Lowest power T8 Instant Start Systems
- Staying in step with the 2014 DOE legislation ruling

QUICKTRONIC Professional

Professional Series products incorporate one or more value added features such as <10% THD, PROStart®, Instant Start, Universal Voltage, etc.

Universal Voltage (120-277V)

Universal voltage models operate from 120-277V, eliminating "incorrect line voltage" wiring errors and reducing the number of models in inventory by half.

"Squiggle"

The "sine wave" graphic logo of the Electronics & Controls division of OSRAM SYLVANIA signifies the transition from old technology to the high frequency, high efficiency electronic systems of the future. SYLVANIA has officially changed the "squiggle" to green.

The Original System Solution

Lamp and ballast systems for optimized performance and longer life.

Control options to meet ASHRAE 90.1-2010 energy code requirements.

T8 & T5 POWERSENSE® Dimming

The industry's first product to operate from either Power-line Fluorescent controllers and/or low-voltage (0-10 Vdc) controls.

- Efficient – Highest energy efficiency dimming system
- Versatile – Controls flexibility and universal-voltage
- Intelligent – Senses faulty wiring and lamp failure

DALI Digital Dimming

DALI digital control technology offers full-range continuous dimming, individual fixture control and feedback. The communications protocol is "DALI", an acronym for "Digital Addressable Lighting Interface". DALI is the worldwide standard for digital lighting control. Available for T5, T5HO, T8 and CFL lamps.

QUICKSTEP® Dimming

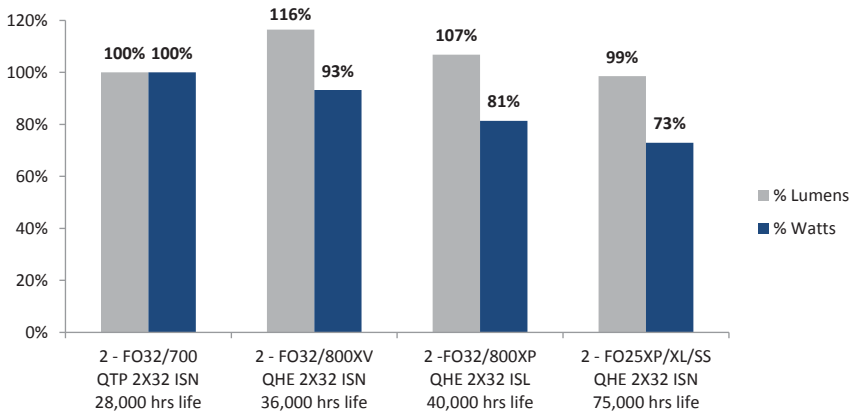
Bi-Level Dimming Programmed Rapid Start ballast for T8, T5 and T5HO lamps that easily switch from 100% to 50% power with standard wall.

Versatile Packaging

New Banded Packaging has replaced the shrink-wrapped product for added benefits:

- Distributor friendly; easy stocking for individual ballast sales
- Contractor friendly; easy handling; no tangled wires
- 10-pack and pallet pack options
- OEM friendly

QUICKTRONIC® High Efficiency T8 Lamp & Ballast Systems Maximize Energy Savings



Note: Average life based on 12 hours per start

QUICKTRONIC® T8 High Efficiency Type CC & Lamp Striation Control (LSC) Models

Offer the same energy saving benefits as the High Efficiency QHE ballasts with two additional advantages:

- Meets UL Type CC (Commercial Cabinet) Rating: New micro-controller circuity reduces arcing caused by loose or improper lamp pin to socket connections.
- Lamp Striation Control, (LSC): LSC circuitry minimizes lamp striations/strobing that can occur at lower temperatures and especially in T8 energy saving lamps.
  (Please consult manufacturers for additional details.)

Key System Features:

- Lowest power T8 Instant Start Systems
- Over 100 LPW (lumens/watt) with OCTRON® SUPERSAVER® lamps
- Provides 30-50% energy savings when compared to F40T12 Magnetic Systems
- QHE/SS Systems provide up to 25% savings compared to standard T8 systems
- Universal input voltage (120-277)

SUPERSAVER® T8 Xtreme Systems

High Efficiency QUICKTRONIC® PROStart® PSX Universal Voltage ballasts, when combined with OCTRON® SUPERSAVER® energy saving high performance T8 lamps, provide the lowest power PROStart T8 systems available.

Key System Features:

- PROStart Xtreme: For frequent switching, longest lamp life
- Universal input voltage (120-277)
- Available in 0.71 ballast factor

QUICKTRONIC T5 & T5HO Systems

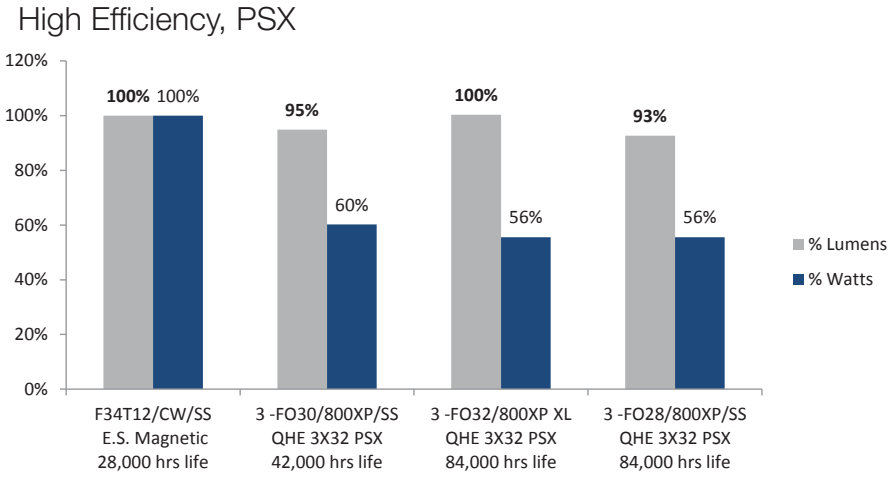
High efficiency, low profile lamp and ballast systems for PENTRON T5, PENTRON T5 HO and DULUX L Lamps.

ICETRON® Systems

Unique “Inductively Coupled Electrodeless Fluorescent Lamp Systems” that provide 100,000 hour rated lamp life for use in high maintenance cost areas.

Electronic Metal Halide Systems

QUICKTRONIC® MH features a state of the art electronic design to deliver performance levels unattainable with standard magnetic based lighting systems. Provides energy savings up to 50% compared to magnetic ballasts.



Note: Average life based on 12 hours per start

QUICKTRONIC® High Efficiency T8 Systems

Meet NEMA Premium Electronic Ballast Program Requirements

SYLVANIA QUICKTRONIC® QHE High Efficiency energy saving electronic T8 ballasts offer several advantages:

- Meet NEMA Premium Electronic Ballast Program Requirements and qualify for utility incentives
- Deliver 30-60% energy savings when compared to F34T12 magnetically ballasted systems
- Offer up to 6% (2-5 Watt) energy savings over standard electronic ballasts
- Achieve over 100 lumens per watt (LPW) with OCTRON® 800 XP® SUPERSAVER® lamps
- Available in:
  - Instant Start and PROStart® (Programmed Rapid Start)
  - Bi-level QUICKSTEP® and POWERSENSE® Dimming models
- Save energy (less power) thus more beneficial to the environment by helping to reduce pollution and greenhouse gas emissions
- Excellent for the most stringent energy codes and sustainability focused projects

Meet Requirements of NEMA Premium Electronic Ballast Program

The NEMA Premium Electronic Ballast Program promotes the use of high efficiency T8 electronic ballasts by meeting or exceeding the Ballast Efficiency Factors (BEF) established by the Consortium for Energy Efficiency (CEE). For additional information on this program visit: www.cee1.org or www.nema.org.

OSRAM SYLVANIA has a variety of high efficiency instant start, programmed rapid start, dimming and bi-level ballasts that comply with the NEMA Premium Electronic Ballast Program. Be sure to look for the “NEMA Premium” mark on our QUICKTRONIC® High Efficiency electronic ballast systems. These systems allow you to meet the increasing demands of the energy efficiency lighting requirements.

NEMA Premium

QUICKTRONIC® High Efficiency T8 Instant Start Systems

NEMA Premium

32 T8 Instant Start Universal Voltage (120-277V) — **Lamp Striation Control**

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
	LOW BALLAST FACTOR										
	QHE 1X32T8/UNV ISL-SC	0.21/0.09	F032/700	2600	1	0.78	2030	1865	25	81	3.12
49837	Banded Pack	0.21/0.09	F032/XP	3000	1	0.78	2340	2200	25	94	3.12
49861	*10-Pack*	0.20/0.09	F030/SS	2850	1	0.78	2225	2090	24	93	3.25
		0.19/0.08	F028/SS	2725	1	0.78	2125	2000	22	97	3.55
		0.17/0.08	F025/SS	2475	1	0.78	1930	1815	20	97	3.90
	QHE 2X32T8/UNV ISL-SC	0.41/0.18	F032/700	2600	2	0.78	4055	3730	48	84	1.63
49838	Banded Pack	0.41/0.18	F032/XP	3000	2	0.78	4680	4400	48	98	1.63
49863	*10-Pack*	0.38/0.16	F030/SS	2850	2	0.78	4445	4180	45	99	1.73
		0.35/0.15	F028/SS	2725	2	0.78	4250	3995	42	101	1.86
		0.32/0.14	F025/SS	2475	2	0.78	3860	3630	38	102	2.05
	QHE 3X32T8/UNV ISL-SC	0.61/0.27	F032/700	2600	3	0.78	6085	5595	73/72	83/85	1.08
49839	Banded Pack	0.61/0.27	F032/XP	3000	3	0.78	7020	6600	73/72	96/98	1.08
49865	*10-Pack*	0.58/0.25	F030/SS	2850	3	0.78	6670	6270	68	98	1.15
		0.53/0.23	F028/SS	2725	3	0.78	6380	5995	63	101	1.24
		0.48/0.21	F025/SS	2475	3	0.78	5790	5445	57	102	1.37
	QHE 4X32T8/UNV ISL-SC	0.80/0.35	F032/700	2600	4	0.78	8110	7455	95	85	0.82
49840	Banded Pack	0.80/0.35	F032/XP	3000	4	0.78	9360	8800	95	99	0.82
49867	*10-Pack*	0.75/0.32	F030/SS	2850	4	0.78	8890	8360	89	100	0.88
		0.71/0.31	F028/SS	2725	4	0.78	8500	7990	84	101	0.93
		0.62/0.27	F025/SS	2475	4	0.78	7720	7260	76/75	102/103	1.04
	NORMAL BALLAST FACTOR										
	QHE 1X32T8/UNV ISN-SC	0.25/0.11	F032/700	2600	1	0.88	2290	2105	28	82	3.14
49968	Banded Pack	0.25/0.11	F032/XP	3000	1	0.88	2640	2480	28	94	3.14
49851	*10-Pack*	0.22/0.09	F030/SS	2850	1	0.88	2510	2360	26	97	3.38
		0.21/0.09	F028/SS	2725	1	0.88	2400	2255	25	96	3.52
		0.19/0.09	F025/SS	2475	1	0.88	2175	2045	22	99	4
	QHE 2X32T8/UNV ISN-SC	0.47/0.20	F032/700	2600	2	0.88	4575	4205	55	83	1.6
49969	Banded Pack	0.47/0.20	F032/XP	3000	2	0.88	5280	4965	55	96	1.6
49853	*10-Pack*	0.44/0.19	F030/SS	2850	2	0.88	5015	4715	52	96	1.69
		0.40/0.18	F028/SS	2725	2	0.88	4800	4510	48	100	1.83
		0.36/0.16	F025/SS	2475	2	0.88	4355	4095	43	101	2.05
	QHE 3X32T8/UNV ISN-SC	0.69/0.30	F032/700	2600	3	0.88	6865	6310	83/82	83/84	1.07
49970	Banded Pack	0.69/0.30	F032/XP	3000	3	0.88	7920	7445	83/82	95/97	1.07
49855	*10-Pack*	0.66/0.28	F030/SS	2850	3	0.88	7525	7075	78/77	96/98	1.14
		0.61/0.26	F028/SS	2725	3	0.88	7195	6760	72	100	1.22
		0.55/0.23	F025/SS	2475	3	0.88	6530	6140	65/64	101/102	1.38
	QHE 4X32T8/UNV ISN-SC	0.91/0.39	F032/700	2600	4	0.88	9150	8415	108/107	85/86	0.82
49971	Banded Pack	0.91/0.39	F032/XP	3000	4	0.88	10560	9925	108/107	98/99	0.82
49857	*10-Pack*	0.86/0.37	F030/SS	2850	4	0.88	10030	9430	102/101	98/99	0.87
		0.80/0.35	F028/SS	2725	4	0.88	9590	9015	95	101	0.93
		0.71/0.30	F025/SS	2475	4	0.88	8710	8190	85	102	1.04

QHE ISL and ISN models above also operate FB032, FB031, F025, FB024, F017, FB016, FB030/SS (30W), FB029/SS (29W)

QHE ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each.

ecologic3

SYLVANIA OCTRON® ECOLOGIC3 fluorescent lamps are designed to satisfy the Federal Toxicity Characteristic Leaching Procedure (TCLP) criteria for classification as non-hazardous waste in most states.* ECOLOGIC3 represents a more comprehensive approach to sustainability encompassing high efficiency, long life and RoHS/TCLP compliance. *Regulations may vary. Check your local and state regulations.

NEMA Premium

NEMA Premium Ballast (NPB) program compliant. The NPB program promotes the use of high efficiency T8 electronic ballasts by meeting or exceeding the Ballast Efficiency Factors, (BEF) established by the CEE, (Consortium for Energy Efficiency). For additional information on this program go to: www.cee1.org or www.nema.org.

QUICKTRONIC® High Efficiency T8 Instant Start Systems

NEMA Premium

32 T8 Instant Start Universal Voltage (120-277V) **Lamp Striation Control**

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
MEDIUM BALLAST FACTOR											
	QHE 2x32T8/UNV ISM-SC	0.54/0.23	F032/700	2600	2	1.00	5200	4780	63/62	84	1.61
49248	Banded Pack	0.54/0.23	F032/XPS	3100	2	1.00	6200	5830	63/62	100	1.61
		0.49/0.21	F030/SS	2850	2	1.00	5700	5360	58	98	1.72
		0.44/0.19	F028/SS	2725	2	1.00	5450	5125	53	103	1.89
		0.41/0.18	F025/SS	2475	2	1.00	4950	4655	50/49	101	2.04
	QHE 3x32T8/UNV ISM-SC	0.76/0.40	F032/700	2600	3	0.98	7645	7025	90/89	86	1.10
49249	Banded Pack	0.76/0.40	F032/XPS	3100	3	0.98	9115	8565	90/89	102	1.10
		0.67/0.30	F030/SS	2850	3	0.98	8380	7875	83	101	1.18
		0.64/0.28	F028/SS	2725	3	0.98	8010	7530	76	105	1.29
		0.59/0.26	F025/SS	2475	3	0.98	7275	6840	70	104	1.40
	QHE 4x32T8/UNV ISM-SC	1.02/0.44	F032/700	2600	4	0.98	10190	9370	122/120	85	0.82
49491	Banded Pack	1.02/0.44	F032/XPS	3100	4	0.98	12150	11425	122/120	101	0.82
		0.95/0.41	F030/SS	2850	4	0.98	11170	10500	114/112	100	0.88
		0.89/0.38	F028/SS	2725	4	0.98	10680	10040	107/105	102	0.93
		0.83/0.36	F025/SS	2475	4	0.98	9700	9120	99/98	99	1.00

QHE ISM models above also operate FB032, FB031, F025, FB024, F017, FB016, FB030/SS (30W), FB029/SS (29W)

HIGH BALLAST FACTOR											
	QHE 3X32T8/UNV ISH-SC	0.93/0.40	F032/700	2600	3	1.18	9205	8460	111/109	83/84	1.08
49875	Banded Pack	0.93/0.40	F032/XP	3000	3	1.18	10620	9985	111/109	96/97	1.08
	10-Pack	0.87/0.38	F030/SS	2850	3	1.18	10090	9485	104/103	97/98	1.15
		0.82/0.35	F028/SS	2725	3	1.18	9650	9070	98/96	98/101	1.23
		0.72/0.31	F025/SS	2475	3	1.18	8760	8235	87/86	101/102	1.37
	QHE 4X32T8/UNV ISH	1.21/0.52	F032/700	2600	4	1.15	11960	10995	144/141	83/84	0.82
49922	Banded Pack	1.21/0.52	F032/XP	3000	4	1.15	13800	12970	144/141	96/98	0.82
49877	*10-Pack*	1.13/0.49	F030/SS	2850	4	1.15	13110	12325	135/133	97/99	0.86
		1.06/0.46	F028/SS	2725	4	1.15	12535	11785	127/124	99/101	0.93
		0.94/0.41	F025/SS	2475	4	1.15	11385	10700	112/111	102/103	1.04

QHE ISH models above also operate FB032, FB031, FB030/SS (30W) & FB029/SS (29W)

QHE ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each.

ecologic3

SYLVANIA OCTRON® ECOLOGIC3 fluorescent lamps are designed to satisfy the Federal Toxicity Characteristic Leaching Procedure (TCLP) criteria for classification as non-hazardous waste in most states.* ECOLOGIC3 represents a more comprehensive approach to sustainability encompassing high efficiency, long life and RoHS/TCLP compliance. *Regulations may vary. Check your local and state regulations.

NEMA Premium

NEMA Premium Ballast (NPB) program compliant. The NPB program promotes the use of high efficiency T8 electronic ballasts by meeting or exceeding the Ballast Efficiency Factors, (BEF) established by the CEE, (Consortium for Energy Efficiency). For additional information on this program go to: www.cee1.org or www.nema.org.

All data shown is for primary lamp types only. Complete data is available in the QUICKTRONIC® Electronic Ballast Technology & Specification Guide and at www.sylvania.com

QUICKTRONIC® High Efficiency T8 Instant Start Systems

NEMA Premium

32 T8 Instant Start Universal Voltage (120-277V) **Type CC & Lamp Striation Control**

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
LOW BALLAST FACTOR											
	QHE 1x32T8/UNV ISL-SC-1	0.21/0.093	F032/700	2600	1	0.77	2000	1840	25	80	3.08
49199	Banded Pack	0.21/0.093	F032/XP	3000	1	0.77	2310	2170	25	92	3.08
		0.20/0.087	F030/SS	2850	1	0.77	2195	2065	24	91	3.21
		0.18/0.081	F028/SS	2725	1	0.77	2100	1970	22	95	3.52
		0.16/0.073	F025/SS	2475	1	0.77	1905	1790	21	91	3.67
	QHE 2x32T8/UNV ISL-SC-1	0.40/0.18	F032/700	2600	2	0.77	4005	3680	48	80	1.60
49200	Banded Pack	0.40/0.18	F032/XP	3000	2	0.77	4620	4345	48	96	1.60
		0.38/0.17	F030/SS	2850	2	0.77	4390	4125	45	98	1.71
		0.35/0.16	F028/SS	2725	2	0.77	4195	3945	42	100	1.83
		0.31/0.14	F025/SS	2475	2	0.77	3810	3585	38	100	2.03
	QHE 3x32T8/UNV ISL-SC-1	0.60/0.26	F032/700	2600	3	0.77	6005	5520	73	83	1.05
49367	Banded Pack	0.60/0.26	F032/XP	3000	3	0.77	6930	6515	73	95	1.05
		0.56/0.24	F030/SS	2850	3	0.77	6585	6190	68	96	1.13
		0.53/0.23	F028/SS	2725	3	0.77	6295	5915	64	98	1.20
		0.47/0.20	F025/SS	2475	3	0.77	5715	5375	57	100	1.35
	QHE 4x32T8/UNV ISL-SC-1	0.81/0.35	F032/700	2600	4	0.77	8000	7360	96	83	0.80
49368	Banded Pack	0.81/0.35	F032/XP	3000	4	0.77	9240	8685	96	96	0.80
		0.76/0.33	F030/SS	2850	4	0.77	8780	8250	90	98	0.86
		0.71/0.31	F028/SS	2725	4	0.77	8395	7890	85	99	0.91
		0.63/0.27	F025/SS	2475	4	0.77	7625	7165	76	100	1.01
NORMAL BALLAST FACTOR											
	QHE 1x32T8/UNV-ISN-SC-1	0.25/0.11	F032/700	2600	1	0.87	2260	2080	28	81	3.11
49381	Banded Pack	0.25/0.11	F032/XP	3000	1	0.87	2610	2455	28	93	3.11
		0.23/0.09	F030/SS	2850	1	0.87	2480	2330	27/26	92/95	3.35
		0.21/0.09	F028/SS	2725	1	0.87	2370	2230	25/24	95/99	3.63
		0.20/0.09	F025/SS	2475	1	0.87	2155	2025	23/22	94/98	3.95
	QHE 2x32T8/UNV-ISN-SC-1	0.47/0.20	F032/700	2600	2	0.87	4525	4160	55	82	1.58
49383	Banded Pack	0.47/0.20	F032/XP	3000	2	0.87	5220	4905	55	95	1.58
		0.44/0.19	F030/SS	2850	2	0.87	4960	4660	52	95	1.67
		0.40/0.18	F028/SS	2725	2	0.87	4740	4455	48/47	99/101	1.85
		0.37/0.16	F025/SS	2475	2	0.87	4305	4050	44/43	98/100	2.02
	QHE 3x32T8/UNV-ISN-SC-1	0.68/0.30	F032/700	2600	3	0.87	6785	6240	82/81	83/84	1.07
49385	Banded Pack	0.68/0.30	F032/XP	3000	3	0.87	7830	7360	82/81	96/97	1.07
		0.65/0.28	F030/SS	2850	3	0.87	7440	6990	77/76	97/98	1.14
		0.61/0.26	F028/SS	2725	3	0.87	7110	6685	72/71	99/100	1.23
		0.55/0.23	F025/SS	2475	3	0.87	6460	6070	65/64	99/101	1.36
	QHE 4x32T8/UNV-ISN-SC-1	0.92/0.39	F032/700	2600	4	0.87	9085	8315	109/107	83/85	0.81
49387	Banded Pack	0.92/0.39	F032/XP	3000	4	0.87	10440	9815	109/107	96/98	0.81
		0.86/0.37	F030/SS	2850	4	0.87	9920	9325	102	97	0.85
		0.80/0.35	F028/SS	2725	4	0.87	9485	8915	95/94	100/101	0.93
		0.74/0.31	F025/SS	2475	4	0.87	8615	8095	87/86	99/100	1.01

QHE ISL, ISN, TypeCC models above also operate FB032, FB031, F025, FB024, F017, FB016, FB030/SS (30W), FB029/SS (29W)

QHE ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each.

QUICKTRONIC® High Efficiency T8 Instant Start Systems

NEMA Premium

32 T8 Instant Start Universal Voltage (120-277V) **Type CC & Lamp Striation Control**

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
HIGH BALLAST FACTOR											
	QHE 2x32T8/UNV ISH-HT-SC-1	0.63/0.28	F032/700	2600	2	1.18	6135	5640	74/73	84	1.62
49783	Banded Pack	0.63/0.28	F032/XP	3000	2	1.18	7080	6660	74/73	97	1.62
		0.59/0.25	F030/SS	2850	2	1.18	6725	6320	70/69	97	1.71
		0.55/0.23	F028/SS	2725	2	1.18	6430	6045	65/64	100	1.84
		0.50/0.22	F025/SS	2475	2	1.18	5840	5490	58/57	102	2.07
	QHE 4x32T8/UNV ISH-HT-1	1.22/0.52	F032/700	2600	4	1.15	11960	10995	144/141	85	0.82
49787	Banded Pack	1.22/0.52	F032/XP	3000	4	1.15	13800	12975	144/141	98	0.82
		1.13/0.49	F030/SS	2850	4	1.15	13110	12325	135/131	99	0.86
		1.06/0.46	F028/SS	2725	4	1.15	12535	11785	127/124	101	0.93
		0.94/0.41	F025/SS	2475	4	1.15	11385	10700	112/111	103	1.04

QHE ISH TypeCC models above also operate FBO32, FBO31, FO25, FBO24, FO17, FBO16, FBO30/SS (30W), FBO29/SS (29W)

QHE ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each.

QUICKTRONIC® Professional Series T8 Instant Start Systems

32 T8 Instant Start Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
					LOW BALLAST FACTOR						
	QTP 2x32T8/UNV ISL-SC	0.44/0.19	F032/700	2600	2	0.78	4055	3730	51	80	1.53
49834	Banded Pack	0.44/0.19	F032/XP	3000	2	0.78	4680	4400	51	92	1.53
49743	*10-Pack*	0.41/0.18	F030/SS	2850	2	0.78	4445	4180	48	93	1.63
		0.38/0.17	F028/SS	2725	2	0.78	4250	3995	45	94	1.73
		0.34/0.15	F025/SS	2475	2	0.78	3860	3630	40	97	1.95
	QTP 3x32T8/UNV ISL-SC	0.65/0.27	F032/700	2600	3	0.78	6085	5595	75	81	1.04
		0.65/0.27	F032/XP	3000	3	0.78	7020	6600	75	94	1.04
49745	10-Pack	0.60/0.26	F030/SS	2850	3	0.78	6670	6270	71	94	1.10
		0.57/0.25	F028/SS	2725	3	0.78	6380	5995	67	95	1.16
		0.50/0.21	F025/SS	2475	3	0.78	5790	5445	59	98	1.32
	QTP 4x32T8/UNV ISL-SC	0.80/0.35	F032/700	2600	4	0.78	8110	7455	98	89	0.80
		0.80/0.35	F032/XP	3000	4	0.78	9360	8800	98	82	0.80
49747	10-Pack	0.78/0.34	F030/SS	2850	4	0.78	8890	8360	92	97	0.85
		0.73/0.32	F028/SS	2725	4	0.78	8500	7990	86	99	0.91
		0.63/0.28	F025/SS	2475	4	0.78	7720	7260	77	100	1.01
					NORMAL BALLAST FACTOR						
	QTP 1x32T8/UNV ISN-SC	0.26/0.11	F032/700	2600	1	0.88	2290	2105	30	76	2.93
49905	Banded Pack	0.26/0.11	F032/XP	3000	1	0.88	2640	2480	30	88	2.93
49941	*10-Pack*	0.25/0.11	F030/SS	2850	1	0.88	2510	2360	28	90	3.14
49942	*Pallet Pack*	0.23/0.10	F028/SS	2725	1	0.88	2400	2255	26	91	3.38
		0.20/0.09	F025/SS	2475	1	0.88	2180	2050	23	95	3.83
	QTP 2x32T8/UNV ISN-SC	0.50/0.21	F032/700	2600	2	0.88	4575	4205	59	78	1.49
49906	Banded Pack	0.50/0.21	F032/XP	3000	2	0.88	5280	4965	59	89	1.49
49943	*10-Pack*	0.46/0.20	F030/SS	2850	2	0.88	5015	4715	55	91	1.60
49944	*Pallet Pack*	0.43/0.19	F028/SS	2725	2	0.88	4795	4510	52	92	1.69
		0.39/0.16	F025/SS	2475	2	0.88	4355	4095	46	95	1.91
	QTP 3x32T8/UNV ISN-SC	0.72/0.31	F032/700	2600	3	0.88	6865	6310	86	80	1.02
49907	Banded Pack	0.72/0.31	F032/XP	3000	3	0.88	7920	7445	86	92	1.02
49945	*10-Pack*	0.69/0.30	F030/SS	2850	3	0.88	7525	7075	81	93	1.09
49946	*Pallet Pack*	0.65/0.28	F028/SS	2725	3	0.88	7195	6760	76	95	1.16
		0.58/0.25	F025/SS	2475	3	0.88	6535	6140	67	98	1.31
	QTP 4x32T8/UNV ISN-SC	0.95/0.40	F032/700	2600	4	0.88	9150	8415	112	80	0.79
49908	Banded Pack	0.95/0.40	F032/XP	3000	4	0.88	10560	9925	112	94	0.79
49947	*10-Pack*	0.91/0.39	F030/SS	2850	4	0.88	10030	9430	105	96	0.84
49948	*Pallet Pack*	0.85/0.37	F028/SS	2725	4	0.88	9590	9015	98	98	0.90
		0.74/0.31	F025/SS	2475	4	0.88	8710	8190	88	99	1.00

Instant Start QTP ISL and ISN also operate these lamps: FBO32, FBO31, FO25, FBO24, FO17, FBO16, FBO30/SS (30W), FBO29/SS (29W)

Ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each. Pallet Pack contains 840 pieces, (add "-PAL" to Description).

QUICKTRONIC® Professional Series T8 Instant Start Systems

32 T8 Instant Start Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
HIGH BALLAST FACTOR											
	QTP 2x32T8/UNV ISH-SC	0.65/0.28	F032/700	2600	2	1.20	6240	5735	78	80	1.54
49843	Banded Pack	0.65/0.28	F032/XP	3000	2	1.20	7200	6770	78	92	1.54
	10-Pack	0.61/0.26	F030/SS	2850	2	1.20	6840	6430	73	93	1.64
		0.57/0.25	F028/SS	2725	2	1.20	6540	6150	69	95	1.74
		0.51/0.22	F025/SS	2475	2	1.20	5940	5585	61	97	1.97
	QTP 3x32T8/UNV ISH-SC	0.95/0.41	F032/700	2600	3	1.18	9360	8605	114/111	82/84	1.06
		0.95/0.41	F032/XP	3000	3	1.18	10620	9985	114/111	93/96	1.06
49845	10-Pack	0.89/0.39	F030/SS	2850	3	1.18	10090	9485	107/104	94/97	1.13
		0.84/0.36	F028/SS	2725	3	1.18	9645	9070	100/98	97/98	1.20
		0.75/0.32	F025/SS	2475	3	1.18	8760	8235	89/88	98/99	1.34

Instant Start QTP ISH also operate these lamps: FBO32, FBO31, FBO30/SS (30W) & FBO29/SS(29W)

QTP ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each.

QUICKTRONIC® High Efficiency T8 PROStart® Systems

NEMA Premium

32 T8 Program Rapid Start Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
LOW BALLAST FACTOR											
	QHE 1x32T8/UNV PSX-MC	0.21/0.09	F032/700	2600	1	0.72	1870	1720	25/24	78	2.94
51423	Banded Pack	0.21/0.09	F032/XPS	3100	1	0.72	2230	2100	25/24	93	3.00
	10-Pack	0.20/0.09	F030/SS	2850	1	0.72	2050	1930	23	88	3.10
		0.18/0.08	F028/SS	2725	1	0.72	1960	1845	21	93	3.41
		0.16/0.07	F025/SS	2475	1	0.72	1780	1675	20/19	92	3.71
	QHE 2x32T8/UNV PSX-MC	0.40/0.17	F032/700	2600	2	0.72	3745	3440	48/47	80	1.53
51428	Banded Pack	0.40/0.17	F032/XPS	3100	2	0.72	4465	4195	48/47	94	1.53
	10-Pack	0.37/0.16	F030/SS	2850	2	0.72	4105	3860	45/43	95	1.66
		0.34/0.15	F028/SS	2725	2	0.72	3925	3690	41/40	98	1.80
		0.31/0.14	F025/SS	2475	2	0.72	3565	3350	38/37	96	1.94
	QHE 3x32T8/UNV PSX-SC	0.58/0.25	F032/700	2600	3	0.71	5540	5090	69/67	83	1.06
51433	Banded Pack	0.58/0.25	F032/XPS	3100	3	0.71	6605	6205	69/67	99	1.06
	10-Pack	0.54/0.23	F030/SS	2850	3	0.71	6070	5705	65/63	97	1.13
		0.50/0.22	F028/SS	2725	3	0.71	5805	5455	60/59	98	1.20
		0.47/0.20	F025/SS	2475	3	0.71	5345	5025	56/55	96	1.28
	QHE 4x32T8/UNV PSX-SC	0.76/0.32	F032/700	2600	4	0.71	7385	6790	90/89	83	0.79
51438	Banded Pack	0.76/0.32	F032/XPS	3100	4	0.71	8770	8240	90/89	99	0.79
	10-Pack	0.72/0.31	F030/SS	2850	4	0.71	8065	7580	86/84	96	0.84
		0.66/0.28	F028/SS	2725	4	0.71	7745	7280	79/77	100	0.92
		0.61/0.26	F025/SS	2475	4	0.71	7060	6640	73/71	99	1.00
NORMAL BALLAST FACTOR TYPE CC, LAMP STRIATION CONTROL & PARALLEL OPERATION											
	QHE 1x32T8/UNV PSN-MC	0.26/0.11	F032/700	2600	1	0.88	2290	2105	30/29	79	3.03
51397	Banded 10-Pack	0.26/0.11	F032/XPS	3100	1	0.88	2730	2565	30/29	94	3.03
51398	*Pallet Pack*	0.24/0.10	F030/SS	2850	1	0.88	2510	2360	28/26	97	3.38
		0.22/0.10	F028/SS	2725	1	0.88	2400	2255	26/25	96	3.52
		0.20/0.09	F025/SS	2475	1	0.88	2180	2045	23	95	3.83
	QHE 2x32T8/UNV PSN-MC	0.48/0.21	F032/700	2600	2	0.88	4575	4205	57/55	83	1.60
51408	Banded 10-Pack	0.48/0.21	F032/XPS	3100	2	0.88	5455	5130	57/55	99	1.60
51409	*Pallet Pack*	0.46/0.20	F030/SS	2850	2	0.88	5015	4715	55/53	95	1.66
		0.43/0.18	F028/SS	2725	2	0.88	4795	4510	51/50	96	1.76
		0.38/0.16	F025/SS	2475	2	0.88	4355	4095	45/44	99	2.00
	QHE 3x32T8/UNV PSN-SC	0.69/0.29	F032/700	2600	3	0.88	6865	6310	83/82	84	1.07
51413	Banded 10-Pack	0.69/0.29	F032/XPS	3100	3	0.88	8185	7695	83/82	100	1.07
51414	*Pallet Pack*	0.68/0.28	F030/SS	2850	3	0.88	7525	7075	80/78	96	1.13
		0.62/0.27	F028/SS	2725	3	0.88	7195	6760	73/72	100	1.22
		0.56/0.24	F025/SS	2475	3	0.88	6535	6140	67/66	99	1.33
	QHE 4x32T8/UNV PSN-SC	0.93/0.39	F032/700	2600	4	0.88	9150	8415	111/108	85	0.81
51418	Banded 10-Pack	0.93/0.39	F032/XPS	3100	4	0.88	10910	10255	111/108	101	0.81
51419	*Pallet Pack*	0.89/0.38	F030/SS	2850	4	0.88	10030	9430	105/103	97	0.85
		0.83/0.35	F028/SS	2725	4	0.88	9590	9015	98/95	101	0.93
		0.77/0.33	F025/SS	2475	4	0.88	8710	8190	91/89	98	0.99

Ballast models above also operate FBO32, FBO31, FO25, FBO24, FO17, FBO16, FBO30/SS (30W), FBO29/SS (29W)

Ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each. Pallet Pack contains 840 pieces, (add "-PAL" to Description).

QUICKTRONIC® High Efficiency T8 PROStart® Systems

NEMA Premium

32 T8 Program Rapid Start Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
HIGH BALLAST FACTOR											
TYPE CC, LAMP STRIATION CONTROL & PARALLEL OPERATION – HIGH AMBIENT TEMPERATURE (90°C Max. Case Temperature)											
	QHE 2x32T8/UNV-PSH-HT	0.60/0.27	F032/700	2600	2	1.15	5980	5500	72/70	83/85	1.64
49450	Banded Pack	0.60/0.27	F032/XPS	3100	2	1.15	7130	6700	72/70	102	1.64
		0.57/0.25	F030/SS	2850	2	1.15	6555	6160	69/67	98	1.72
		0.53/0.23	F028/SS	2725	2	1.15	6270	5890	63/62	101	1.85
		0.47/0.20	F025/SS	2475	2	1.15	5695	5350	56/55	104	2.09
	QHE 3x32T8/UNV-PSH-HT	0.94/0.4	F032/700	2600	3	1.15	8970	8245	110/108	82/83	1.06
49453	Banded Pack	0.94/0.4	F032/XPS	3100	3	1.15	10695	10055	110/108	99	1.06
		0.88/0.37	F030/SS	2850	3	1.15	9835	9245	104/101	97	1.14
		0.81/0.34	F028/SS	2725	3	1.15	9400	8835	95/93	101	1.24
		0.72/0.31	F025/SS	2475	3	1.15	8540	8025	85/84	102	1.37
	QHE 4x32T8/UNV-PSH-HT	1.22/0.53	F032/700	2600	4	1.15	11960	10995	143/141	84/85	0.82
49455	Banded Pack	1.22/0.53	F032/XPS	3100	4	1.15	14260	13405	143/141	101	0.82
		1.13/0.49	F030/SS	2850	4	1.15	13110	12325	99/101	101	0.88
		1.06/0.46	F028/SS	2725	4	1.15	12535	11785	101/102	102	0.93
		0.95/0.41	F025/SS	2475	4	1.15	11385	10700	102/104	104	1.05

Ballast models above also operate FB032, FB031, F025, FB024, F017, FB016, FB030/SS (30W), FB029/SS (29W)

Ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each.

QUICKTRONIC® High Efficiency T8HO PROStart® Systems

T8HO PROStart® Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
NORMAL BALLAST FACTOR HIGH AMBIENT TEMPERATURE (90°C Max. Case Temperature)											
50304	QHE 2x86T8HO/UNV-PSN-HT Banded Pack	1.54/0.67	F96T8HO (86W)	8200	2	0.95	15580	14645	182/178	86/88	0.53
		1.13/0.50	F72T8HO (65W)	6100	2	0.96	11710	10540	136/133	86/88	0.72
		0.97/0.44	F60T8HO (55W)	5050	2	0.96	9695	8725	115	84	0.83
		0.72/0.34	F48T8HO (44W)	4000	2	0.96	7680	6910	86/85	89/90	1.13
		0.78/0.36	F96T8HO (86W)	8200	1	0.96	7870	7400	95	83	1.01
		0.62/0.30	F72T8HO (65W)	6100	1	0.96	5855	5270	73	80	1.32
		0.50/0.26	F60T8HO (55W)	5050	1	0.96	4850	4365	60	81	1.60
		0.43/0.24	F48T8HO (44W)	4000	1	0.96	3840	3455	51	75	1.88

Ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each.

QUICKTRONIC® High Efficiency 59 T8 (8-foot) Instant Start Systems

59 T8 (8-foot) Instant Start Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
LOW BALLAST FACTOR											
	QHE 2x59T8/UNV-ISL-SC	0.80/0.34	F096T8/700 (59W)	5700	2	0.77	8780	7900	95/94	92/93	0.82
		0.80/0.34	F096T8/XP (59W)	6100	2	0.77	9395	8830	95/94	99/100	0.82
49869	10-Pack	0.73/0.31	F096T8/54W/XP/SS	5700	2	0.77	8780	8250	87/85	101/103	0.91
		0.67/0.29	F096T8/50W/XP/SS	5400	2	0.75	8100	7615	79/78	103/104	0.96
		0.62/0.27	F072T8/XP	4650	2	0.79	7345	6905	74/73	99/101	1.08
		0.42/0.19	F048T8/XP	2850	2	0.80	4560	4285	50	91	1.60
NORMAL BALLAST FACTOR											
	QHE 2x59T8/UNV-ISN-SC	0.92/0.40	F096T8/700 (59W)	5700	2	0.88	10030	9030	109/107	92/94	0.82
50237	Banded Pack	0.92/0.40	F096T8/XP (59W)	6100	2	0.88	10735	10090	109/107	98/100	0.82
49859	*10-Pack*	0.84/0.36	F096T8/54W/XP/SS	5700	2	0.88	10030	9430	99/98	101/102	0.90
		0.76/0.32	F096T8/50W/XP/SS	5400	2	0.85	9180	8630	90/89	102/103	0.96
		0.71/0.31	F072T8/XP	4650	2	0.90	8370	7870	84/83	100/101	1.08
		0.47/0.22	F048T8/XP	2850	2	0.90	5130	4820	56	92	1.61
HIGH BALLAST FACTOR											
	QHE 2x59T8/UNV-ISH	1.20/0.52	F096T8/700 (59W)	5700	2	1.15	13110	11800	144/141	91/93	0.82
		1.20/0.52	F096T8/XP (59W)	6100	2	1.15	14030	13190	144/141	97/100	0.82
49879	10-Pack	1.10/0.47	F096T8/54W/XP/SS	5700	2	1.14	12995	12215	131/130	99/100	0.88
		1.01/0.43	F096T8/50W/XP/SS	5400	2	1.10	11880	11165	119/118	100/101	0.93
		0.91/0.40	F072T8/XP	4650	2	1.15	10695	10055	108	99	1.06
		0.62/0.28	F048T8/XP	2850	2	1.18	6725	6320	74	91	1.59

Ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.
F096T8/XP/SS (55W) has been re-rated to F096/54W/XP/SS.
[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value uless otherwise noted.
Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each.

QUICKTRONIC® Professional Series 59 T8 (8-foot) Instant Start Systems

59 T8 (8-foot) Instant Start Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
NORMAL BALLAST FACTOR											
	QTP 2x59T8/UNV ISN-SC	0.93/0.40	F096T8/700 (59W)	5700	2	0.88	10030	9030	112/110	90/91	0.80
49590	Banded Pack	0.93/0.40	F096T8/XP (59W)	6100	2	0.88	10735	10090	112/110	96/98	0.80
49598	*10-Pack*	0.85/0.36	F096T8/54W/XP/SS	5700	2	0.88	10030	9430	104/102	96/98	0.86
		0.70/0.31	F072T8/XP	4650	2	0.89	8275	7780	86/85	96/97	1.05
		0.47/0.21	F048T8/XP	2850	2	0.89	5075	4770	58	88	1.53
		0.56/0.25	F096T8/XP (59W)	6100	1	1.02	6220	5850	67	93	1.52
		0.51/0.22	F096T8/54W/XP/SS	5700	1	1.02	5815	5465	62	94	1.65
		0.43/0.20	F072T8/XP	4650	1	1.02	4745	4460	51	93	2.00
		0.30/0.14	F048T8/XP	2850	1	1.03	2935	2760	36	82	2.86

Ballasts operate additional T8 lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.
F096T8/XP/SS (55W) has been re-rated to F096/54W/XP/SS.
[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value unless otherwise noted.
Banded Pack, (add "-B" to Description). Banded Pack and 10-Pack contain 10 pieces each.

QUICKTRONIC® 347 Volt CANADIAN Systems

High Efficiency 32 T8 Instant Start 347V Systems – CANADA

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
LOW BALLAST FACTOR											
49471	QHE 1X32T8/347 ISL-SC	0.08	F032/700	2600	1	0.78	2030	1865	25	81	3.12
		0.08	F032/XP	3000	1	0.78	2340	2200	25	94	3.12
		0.07	F030/SS	2850	1	0.78	2220	2090	24	93	3.25
		0.07	F028/SS	2725	1	0.78	2125	2000	22	97	3.55
		0.06	F025/SS	2475	1	0.78	1930	1815	20	97	3.90
49473	QHE 2X32T8/347 ISL-SC	0.14	F032/700	2600	2	0.78	4055	3730	48	84	1.63
		0.14	F032/XP	3000	2	0.78	4680	4400	48	98	1.63
		0.13	F030/SS	2850	2	0.78	4445	4180	46	97	1.70
		0.12	F028/SS	2725	2	0.78	4250	3995	43	99	1.81
		0.12	F025/SS	2475	2	0.78	3860	3630	38	102	2.05
49475	QHE 3X32T8/347 ISL-SC	0.21	F032/700	2600	3	0.78	6085	5595	71	86	1.10
		0.21	F032/XP	3000	3	0.78	7020	6600	71	99	1.10
		0.20	F030/SS	2850	3	0.78	6670	6270	67	100	1.16
		0.18	F028/SS	2725	3	0.78	6380	5995	62	103	1.26
		0.17	F025/SS	2475	3	0.78	5790	5445	55	105	1.42
49477	QHE 4X32T8/347 ISL-SC	0.28	F032/700	2600	4	0.78	8110	7455	96	84	0.81
		0.28	F032/XP	3000	4	0.78	9360	8800	96	98	0.81
		0.26	F030/SS	2850	4	0.78	8890	8360	90	99	0.87
		0.25	F028/SS	2725	4	0.78	8500	7990	84	101	0.93
		0.23	F025/SS	2475	4	0.78	7720	7260	74	104	1.05
NORMAL BALLAST FACTOR											
49461	QHE 1X32T8/347 ISN-SC	0.08	F032/700	2600	1	0.88	2030	1865	28	73	3.14
		0.08	F032/XP	3000	1	0.88	2640	2480	28	94	3.14
		0.08	F030/SS	2850	1	0.88	2510	2360	27	93	3.26
		0.07	F028/SS	2725	1	0.88	2400	2255	25	96	3.52
		0.07	F025/SS	2475	1	0.88	2175	2045	22	99	4.00
49463	QHE 2X32T8/347 ISN-SC	0.16	F032/700	2600	2	0.88	4055	3730	55	74	1.60
		0.16	F032/XP	3000	2	0.88	5280	4965	55	96	1.60
		0.15	F030/SS	2850	2	0.88	5015	4715	52	96	1.69
		0.14	F028/SS	2725	2	0.88	4800	4510	48	100	1.83
		0.13	F025/SS	2475	2	0.88	4355	4095	43	101	2.05
49465	QHE 3X32T8/347 ISN-SC	0.25	F032/700	2600	3	0.88	6085	5595	83	73	1.06
		0.25	F032/XP	3000	3	0.88	7920	7445	83	95	1.06
		0.24	F030/SS	2850	3	0.88	7525	7075	78	96	1.13
		0.22	F028/SS	2725	3	0.88	7195	6765	74	97	1.19
		0.20	F025/SS	2475	3	0.88	6530	6140	66	99	1.33
49467	QHE 4X32T8/347 ISN-SC	0.33	F032/700	2600	4	0.88	8100	7455	109	74	0.81
		0.33	F032/XP	3000	4	0.88	10,560	9925	109	97	0.81
		0.31	F030/SS	2850	4	0.88	10,030	9430	103	97	0.85
		0.29	F028/SS	2725	4	0.88	9590	9015	97	99	0.91
		0.26	F025/SS	2475	4	0.88	8710	8190	87	100	1.01

Instant Start QHE ISL and ISN models also operate FB032, FB031, F025, FB024, F017, FB016, FB030/SS (30W), FB029/SS (29W)

Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

QUICKTRONIC® 347 Volt CANADIAN Systems

Professional Series 32T8 Instant Start 347V Systems – CANADA

High Efficiency 32 T8 Instant Start 347V Systems – CANADA

						NORMAL BALLAST FACTOR					
49713	QTP 2x32T8/347 ISN-SC	0.165	FO32/XP	3000	2	0.88	5280	4965	59	89	1.49
49716	QTP 3x32T8/347 ISN-SC *Pallet Pack*	0.25	FO32/XP	3000	3	0.88	7920	7445	86	92	1.02
49718	QTP 4x32T8/347 ISN-SC *Pallet Pack*	0.33	FO32/XP	3000	4	0.88	10560	9925	112	94	0.78

QTP ISN models above also operate FBO32, FBO31, FO25, FBO24, FO17, FBO16, F030/SS (30W), FBO30/SS (30W), FBO29/SS (29W), F028/SS (28W), FO25/SS (25W)

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value unless otherwise noted.
Pallet Pack contains 840 pieces, (add "– PAL" to Description).

QUICKTRONIC® High Efficiency Bi-level Step Dimming PROStart® Systems

32 T8 QUICKSTEP® (Bi-Level) Dimming Systems (120-277V)

NEMA Premium

Item Number	OSRAM SYLVANIA Description		Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
LOW BALLAST FACTOR (100% to 50%)												
	QHES 2x32T8/UNV PSL-SC	(@100%)	0.40/0.18	FO32/XPS	3100	2	0.77	4775	4490	48	99	1.60
49158	Banded Pack	(@50%)	0.20/0.09	FO32/XPS	3100	2	0.25	1550	1455	24	65	1.04
		(@100%)	0.39/0.17	FO30/SS	2850	2	0.77	4390	4125	46	95	1.67
		(@50%)	0.20/0.09	FO30/SS	2850	2	0.25	1425	1340	23	62	1.09
		(@100%)	0.36/0.16	FO28/SS	2725	2	0.77	4195	3945	42	100	1.83
		(@50%)	0.19/0.09	FO28/SS	2725	2	0.25	1365	1280	22	62	1.14
		(@100%)	0.32/0.14	FO25/SS	2475	2	0.77	3810	3585	38	100	2.03
		(@50%)	0.18/0.08	FO25/SS	2475	2	0.25	1240	1165	21	59	1.19
		(@100%)	0.21/0.10	FO32/XPS	3100	1	0.78	2420	2275	25	97	3.12
		(@50%)	0.12/0.06	FO32/XPS	3100	1	0.25	775	730	15	52	1.67
		(@100%)	0.20/0.09	FO30/SS	2850	1	0.78	2225	2090	24	93	3.25
		(@50%)	0.12/0.06	FO30/SS	2850	1	0.25	715	670	15	48	1.67
		(@100%)	0.18/0.09	FO28/SS	2725	1	0.78	2125	2000	22	97	3.55
		(@50%)	0.12/0.06	FO28/SS	2725	1	0.25	680	640	14	49	1.79
		(@100%	0.17/0.07	FO25/SS	2475	1	0.78	1930	1815	20	97	3.90
		(@50%)	0.11/0.05	FO25/SS	2475	1	0.25	620	580	13	48	1.92
NORMAL BALLAST FACTOR (100% to 50%)												
	QHES 2x32T8/UNV PSN-SC	(@100%)	0.46/0.20	FO32/XPS	3100	2	0.87	5395	5070	55/54	100	1.61
49157	Banded Pack	(@50%)	0.23/0.10	FO32/XPS	3100	2	0.34	2110	1980	27	78	1.26
		(@100%)	0.44/0.19	FO30/SS	2850	2	0.87	4960	4660	53/52	95	1.67
		(@50%)	0.22/0.10	FO30/SS	2850	2	0.34	1940	1820	26	75	1.31
		(@100%)	0.40/0.18	FO28/SS	2725	2	0.88	4795	4510	49	98	1.80
		(@50%)	0.22/0.10	FO28/SS	2725	2	0.34	1855	1740	25	74	1.36
		(@100%)	0.37/0.16	FO25/SS	2475	2	0.88	4355	4095	43	101	2.05
		(@50%)	0.21/0.10	FO25/SS	2475	2	0.34	1685	1580	24	70	1.42
		(@100%)	0.21/0.10	FO32/XPS	3100	1	0.87	2695	2535	28/29	93	3.00
		(@50%)	0.12/0.06	FO32/XPS	3100	1	0.34	1055	990	16/17	62	2.00
		(@100%)	0.21/0.10	FO30/SS	2850	1	0.87	2480	2330	26	95	3.35
		(@50%)	0.12/0.06	FO30/SS	2850	1	0.34	970	910	16	61	2.13
		(@100%)	0.21/0.10	FO28/SS	2725	1	0.88	2400	2255	25	96	3.52
		(@50%)	0.12/0.06	FO28/SS	2725	1	0.34	925	870	15	62	2.27
		(@100%)	0.20/0.09	FO25/SS	2475	1	0.88	2180	2045	22/23	95	3.83
		(@50%)	0.12/0.05	FO25/SS	2475	1	0.34	840	790	14	60	2.43

T5HO at 35°C lamp ambient temperature

Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

QUICKTRONIC® High Efficiency 28T5 Bi-Level Step Dimming PROStart® Systems

Item Number	OSRAM SYLVANIA Description		Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
0.80 BALLAST FACTOR (100% to 50%)												
51496	QHES2x28T5/UNV PS90SC	(@100%)	0.46/0.20	FP28T5XP	3125	2	0.90	5625	5345	55/54	104	1.67
49176	*10-pack*	(@50%)	0.23/0.10	FP28T5XP	3125	2	0.35	2190	2080	27	81	1.30
	Pallet Pack	(@100%)	0.46/0.20	FP28T5PM/ECO	3050	2	0.90	5490	5215	55/54	102	1.67
		(@50%)	0.23/0.10	FP28T5PM/ECO	3050	2	0.35	2135	2030	27	79	1.30
		(@100%)	0.46/0.20	FP28T5	2900	2	0.90	5220	4960	55/54	97	1.67
		(@50%)	0.23/0.10	FP28T5	2900	2	0.35	2030	1930	27	75	1.30
		(@100%)	0.35/0.16	FP21T5	2100	2	0.92	3865	3595	42	92	2.19
		(@50%)	0.18/0.09	FP21T5	2100	2	0.37	1555	1445	22	71	1.68
		(@100%)	0.24/0.12	FP14T5	1350	2	0.95	2565	2385	29	88	3.28
		(@50%)	0.14/0.07	FP14T5	1350	2	0.37	1000	930	17	59	2.18

QUICKTRONIC® Professional Series Bi-level Step Dimming PROStart® Systems

54 T5HO QUICKSTEP® (Bi-Level) FP54T5HO Dimming Systems (120-277V)

Item Number	OSRAM SYLVANIA Description		Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
0.80 BALLAST FACTOR (100% to 50%)												
49419	QS 2x54T5HO/UNV PS80SC	(@100%)	0.80/0.34	FP54T5HO	5000	2	0.80	8000	7440	96/93	83/86	0.86
		(@50%)	0.44/0.19	FP54T5HO	5000	2	0.40	4000	3720	52/51	77/78	0.78

T5HO at 35°C lamp ambient temperature

Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

QUICKTRONIC® High Efficiency Full Range Dimming PROStart® Systems

32 T8 POWERSENSE® T8 Dimming Systems (120-277V)

Full Range Dimming NEMA Premium

Item Number	OSRAM SYLVANIA Description		Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
NORMAL BALLAST FACTOR (100% through 5%)												
50705	QTP 1x32T8/UNV DIM-TC	(@100%)	0.27/0.12	FO32/XPS	3100	1	0.88	2730	2565	30	91	2.93
		(@5%)				1	0.05	155	145	8		
50707	QTP 2x32T8/UNV DIM-TC	(@100%)	0.54/0.24	FO32/XPS	3100	2	0.88	5455	5130	59/57	92/96	1.54
		(@5%)				2	0.05	310	290	14		
50714	QTP 3x32T8/UNV DIM-TCL	(@100%)	0.73/0.30	FO32/XPS	3100	3	0.88	8185	7695	87/84	94/97	1.05
		(@5%)				3	0.05	465	435	20		
50716	QTP 4x32T8/UNV DIM-TCL	(@100%)	0.96/0.40	FO32/XPS	3100	4	0.88	10910	10255	114/110	96/99	0.80
		(@5%)				4	0.05	620	585	27		

T8 POWERSENSE® models above also operate FO25, FO17, FO30/SS, FO28/SS, FO25/SS, FBO32, FBO31, FBO24, FBO16. See full specifications for details and controls.

28 T5 POWERSENSE® T5 Dimming Systems (120-277V)

Full Range Dimming

Item Number	OSRAM SYLVANIA Description		Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
50725	QHE1x28T5/UNV DIM-TC		0.27/0.12	FP28T5	2900	1	1.00	2900	32	31	94	3.23
							0.01	29	6	6		
			0.34/0.14	FP35T5	3650	1	1.00	3560	41	40	91	2.50
							0.01	37	6	6		
			0.21/0.09	FP21T5	2100	1	1.00	2100	25	25	84	4.00
							0.01	21	6	6		
			0.14/0.06	FP14T5	1350	1	1.00	1350	17	17	79	5.88
							0.01	14	5	5		
NORMAL BALLAST FACTOR (100% through 1%)												
50726	QTP 2x28T5/UNV DIM-TCL	(@100%)	0.53/0.23	FP28T5	2900	2	1.00	5800	5400	64/62	91/93	1.61
		(@1%)					0.01	58	55	10		
		(@100%)	0.67/0.29	FP35T5	3650	2	1.00	7300	6790	81/79	90/92	1.27
		(@1%)					0.01	73	70	10		
		(@100%)	0.40/0.18	FP21T5	2100	2	1.00	4200	3905	49	86	2.04
		(@1%)					0.01	42	40	9		
		(@100%)	0.29/0.13	FP14T5	1350	2	1.00	2700	2510	34	79	2.94
		(@1%)					0.01	27	25	8		

POWERSENSE® ballasts work with Fluorescent Power Line Dimmers and 0-10VDC controls. For a list of available controls, please refer to the control section in this catalog or visit http://www.sylvania.com.

QUICKTRONIC® High Efficiency Full Range Dimming PROStart® Systems

High Efficiency, T5HO Controllable Lighting Systems, Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp[1] Type	Rated[1] Lumens (lm)	No. of Lamps	Ballast[1] Factor (BF)	System[1] Lumens	Mean[1] Lumens	Input[1] Power (W) 120V	Input[1] Power (W) 277V	System Efficacy[3] (lm/W)	BEF[2]
51467	QHE 2x54T5HO/UNV DIM-TCL	1.00/0.42	FP54T5HO	5000	2	1.00	10000	9300	120	116	86	0.86
						0.01	100	95	15	15		
	10-pack	1.00/0.42	FT55DL	4800	2	1.00	9600	8930	120	116	83	0.86
						0.01	95	90	15	15		
		1.00/0.42	L58	5200	2	1.00	10400	9670	120	116	90	0.86
						0.01	105	95	15	15		
		1.00/0.42	FPC55	4000	2	1.00	8000	7440	120	116	69	0.86
						0.01	80	75	15	15		
51468	QHE1x54T5HO/UNV DIM-TC	0.51/0.21	FP54T5HO	5000	1	1.00	5000	4650	62	60	83	1.67
	10-pack					0.01	50	45	8	8		
		0.51/0.21	FT55DL	4800	1	1.00	4800	4465	62	60	80	1.67
						0.01	45	40	8	8		
		0.51/0.21	L58	5200	1	1.00	5200	4835	62	60	87	1.67
						0.01	50	45	8	8		
		0.51/0.21	FPC55	4000	1	1.00	4000	3725	62	60	67	1.67
						0.01	40	35	8	8		

[1] At 35ºC lamp ambient temperature.
[2] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[3] System Efficacy calculation based on lowest input power value.

QUICKTRONIC® Professional Series Full Range Dimming PROStart® Systems

54 T5HO HELIOS™ (0-10 VDC) T5HO Dimming Systems (120-277V)

Full Range Dimming 

Item Number	OSRAM SYLVANIA Description		Input Voltage (VAC)	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
NORMAL BALLAST FACTOR (100% through 1%)												
	QT 1x54/120PHO-DIM	(@100%)	120	0.54	FP54T5HO	5000	1	1.00	5000	62	81	1.61
49671	20-Pack	(@1%)						0.01	50	8		
	QT 1x54/277PHO-DIM	(@100%)	277	0.23	FP54T5HO	5000	1	1.00	5000	61	82	1.64
49672	20-Pack	(@1%)						0.01	50	8		
	QT 2x54/120PHO-DIM	(@100%)	120	1.07	FP54T5HO	5000	2	1.00	10000	120	83	0.83
49673	20-Pack	(@1%)						0.01	100	18		
	QT 2x54/277PHO-DIM	(@100%)	277	0.45	FP54T5HO	5000	2	1.00	10000	117	85	0.85
49674	20-Pack	(@1%)						0.01	100	18		

HELIOS™ ballasts work with 0-10VDC controls. For a list of available controls, please refer to the control section in this catalog or visit http://www.sylvania.com.

T5/T5HO at 35°C lamp ambient temperature

Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

HELIOS™ (0-10V) CF Fluorescent Dimming Systems, UNV (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[1] (lm/W)	BEF[2]
0.80 BALLAST FACTOR (100% to 50%)											
	QTP 2x26CF/UNV DIM-DM	0.44/0.19	26W DD/E, DT/E	1800	2	1.00	3600	3095	53/53	68	1.89
51836	(20-pack)					0.03	110	95	12/12		
		0.32/0.14	18W DD/E, DT/E	1200	2	1.00	2400	2065	38/37	65	2.70
						0.03	70	60	10/10		
		0.26/0.11	13W DD/E, DT/E	900	2	1.00	1800	1550	30/30	60	3.33
						0.03	55	45	8/8		
		0.39/0.17	42W DT/E	3200	1	1.00	3200	2750	46/46	70	2.17
						0.03	95	85	7/7		
		0.29/0.13	32W DT/E	2400	1	1.00	2400	2065	34/34	71	2.94
						0.03	70	60	7/7		
		0.24/0.11	26W DD/E, DT/E	1800	1	1.00	1800	1550	29/29	62	3.45
						0.03	55	45	7/7		
		0.17/0.08	18W DD/E, DT/E	1200	1	1.00	1200	1030	21/21	57	4.76
						0.03	35	30	6/6		
		0.14/0.07	13W DD/E, DT/E	900	1	1.00	900	775	17/17	53	5.88
						0.03	25	20	5/5		

[1] System Efficacy calculation based on lowest input power value.

[2] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

QUICKTRONIC® DALI Dimming Systems

High Efficiency, DALI T8 Dimming Systems, Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	Initial System Lumens	Mean System Lumens	System Power (W) 120V	System Power (W) 277V	System Efficacy[1] (lm/W)	BEF[2]
51354	QHE1x32T8/UNV Dali	0.27/0.12	F032XP	3000	1	1.00	3000	2820	33	33	90	3.08
						0.03	90	85	7	7		
	20-pack	0.27/0.12	F030/SS	2850	1	1.00	2850	2680	31	31	93	3.28
						0.03	85	80	7	7		
		0.23/0.10	F028/SS	2725	1	1.00	2725	2535	28	28	96	3.50
						0.03	83	75	6	6		
		0.21/0.09	F025/SS	2475	1	1.00	2475	2303	27	27	95	3.84
						0.03	75	70	6	6		
		0.22/0.10	F025/XP	2175	1	1.00	2175	2023	26	26	87	4.00
						0.03	65	60	6	6		
		0.16/0.07	F017/XP	1375	1	1.00	1375	1280	19	19	76	5.26
						0.03	43	38	6	6		
51355	QHE 2x32T8/UNV DALI	0.56/0.24	F032XP	3000	2	1.00	6000	5640	66	65	92	1.54
	20-pack					0.03	180	170	13	13		
		0.53/0.23	F030/SS	2850	2	1.00	5700	5360	63	61	93	1.64
						0.03	170	160	13	13		
		0.49/0.21	F028/SS	2725	2	1.00	5450	5070	58	57	96	1.75
						0.03	165	150	13	13		
		0.45/0.20	F025/SS	2475	2	1.00	4950	4605	53	52	95	1.92
						0.03	150	140	13	13		
		0.43/0.19	F025/XP	2175	2	1.00	4350	4045	51	50	87	2.00
						0.03	130	120	12	13		
		0.31/0.14	F017/XP	1375	2	1.00	2750	2560	37	36	76	2.78
						0.03	85	75	12	12		

[1] System Efficacy is based on the lowest System Power.
[2] (BEF) Ballast Efficiency Factor shown = (Ballast Factor x 100) divided by System Power (Note: calculation based on lowest system power).

T5 DALI Dimming Systems (120-277V)

Full Range Dimming

Item Number	OSRAM SYLVANIA Description		Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
DALI (100% through 1%)												
51357	QTP 1x14T5/UNV DALI	(@100%)	0.15/0.07	FP14T5	1350	1	1.00	1350	1255	19	71	5.26
		(@1%)					0.01	14	13	6		
51359	QTP 2x14T5/UNV DALI	(@100%)	0.29/0.13	FP14T5	1350	2	1.00	2700	2510	35	77	2.86
		(@1%)					0.01	27	25	10		

T5/T5HO at 35°C lamp ambient temperature
Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.
DALI ballasts works with DALI controls. Please contact DALI control manufacturers for additional details. Also go to www.lightingcontrolsassociation.org.
[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value unless otherwise noted.
☼ Ballasts will be replaced by QHE High Efficiency DALI models. Contact OSRAM SYLVANIA for product availability and detailed specifications.

QUICKTRONIC® DALI Dimming Systems

T5 DALI Dimming Systems (120-277V)

Full Range Dimming

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	Initial System Lumens	Mean System Lumens	System Power (W) 120V	System Power (W) 277V	System Efficacy[1] (lm/W)	BEF[2]
51456	QHE 1x28T5/UNV DALI	0.27/0.12	FP28T5	2900	1	1.00	2900	2725	32	31	94	3.23
	20-pack					0.01	30	25	8	8		
51458	QHE 2x28T5/UNV DALI	0.52/0.22	FP28T5	2900	2	1.00	5800	5450	62	60	97	1.67
	20-pack					0.01	60	55	12	12		

[1] System Efficacy is based on the lowest System Power.
[2] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by System Power (Note: calculation based on lowest system power).

54 T5HO DALI Dimming Systems (120-277V)

Full Range Dimming

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	Initial System Lumens	Mean System Lumens	System Power (W) 120V	System Power (W) 277V	System Efficacy[1] (lm/W)	BEF[2]
51464	QHE 1x54T5HO/UNV DALI	0.52/0.22	FP54T5HO	5000	1	1.00	5000	4700	62	60	83	1.67
	20-pack					0.01	50	45	10	10		
51466	QHE 2x54T5HO/UNV DALI	1.0/0.42	FP54T5HO	5000	2	1.00	10000	9400	119	116	86	0.86
	20-pack					0.01	100	95	15	15		

[1] System Efficacy is based on the lowest System Power.
[2] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by System Power (Note: calculation based on lowest system power).

QUICKTRONIC® DALI Dimming Systems

CFL (18W / 26W / 32W / 40W / 42W) DALI Dimming Systems (120-277V) **Full Range Dimming**

Item Number	OSRAM SYLVANIA Description		Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
DALI (100% through 3%)												
51370	QTP 1x18CF/UNV DALI	(@100%)	0.18/0.08	18W	1200	1	1.00	1200	1030	20	60	5.00
		(@3%)		DD/E, T/E			0.03	35	30			
51372	QTP 2x18CF/UNV DALI	(@100%)	0.33/0.14	18W	1200	2	1.00	2400	2065	39/38	61/63	2.63
		(@3%)		DD/E, T/E			0.03	70	60			
51375	QTP 1x26CF/UNV DALI	(@100%)	0.24/0.10	26W	1800	1	1.00	1800	1550	28	64	3.57
		(@3%)		DD/E, T/E			0.03	55	45	8		
51377	QTP 2x26CF/UNV DALI	(@100%)	0.49/0.22	26W	1800	2	1.00	3600	3095	55/54	65/67	1.85
		(@3%)		DD/E, T/E			0.03	110	95	14		
51384	QTP 1x42CF/UNV DALI	(@100%)	0.43/0.19	42W DT/E	3200	1	1.00	3200	2750	50	64	2.00
		(@3%)					0.03	95	85	11/13		
51386	QTP 2x42CF/UNV DALI	(@100%)	0.82/0.36	42W DT/E	3200	2	1.00	6400	5505	100/98	64/65	1.10
		(@3%)					0.03	190	165	17/19		
51390	QTP 1x40TT5/UNV DALI	(@100%)	0.41/0.17	40W DL	3150	1	1.00	3150	2710	45/44	70/72	2.27
		(@3%)					0.03	95	80			
51392	QTP 2x40TT5/UNV DALI	(@100%)	0.83/0.37	40W DL	3150	2	1.00	6300	5420	97/94	65/67	1.06
		(@3%)					0.03	190	165			

T5/T5HO at 35°C lamp ambient temperature
Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.
DALI ballasts works with DALI controls. Please contact DALI control manufacturers for additional details. Also go to www.lightingcontrolsassociation.org.
[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

DALI Controls Information
Encelium® Energy Management System – www.encelium.com
Siemens Building Technology – http://sbt.siemens.com
Cooper – http://greengate.coopercontrol.com
Crestron – www.crestron.com
Hunt Dimming – www.huntdimming.com
Leviton – www.leviton.com
Starfield Controls – www.starfieldcorp.com
Watt Stopper – www.wattstopper.com
Please contact controls manufacturer to order/specify controls. For the latest controls list go to www.sylvania.com. Also for more information, check out the LCA (Lighting Controls Association) site: www.lightingcontrolsassociation.org.

QUICKTRONIC® High Efficiency T5 & T5HO PROStart® Systems

28 T5, Type CC, Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power 120V	Input Power 277V	System Efficacy[2] (lm/W)	BEF[1]
	QHE 2x28T5/UNV PSN	0.55/0.23	FP28T5	2900	2	1.00	5800	5395	63	62	94	1.61
51473	20-pack (connectors/no leads)	0.68/0.29	FP35T5	3650	2	0.99	7225	6720	80	78	93	1.27
(51472)*	10-pack (with leads)	0.39/0.18	FP21T5	2100	2	1.01	4240	3945	47	46	92	2.20
		0.27/0.13	FP14T5	1350	2	1.03	2780	2585	32	32	87	3.22
		0.27/0.12	FP28T5	2900	1	1.00	2900	2695	33	32	91	3.13
		0.34/0.15	FP35T5	3650	1	1.02	3725	3460	41	40	93	2.55
		0.21/0.10	FP21T5	2100	1	1.04	2185	2030	25	24	91	4.33
		0.15/0.07	FP14T5	1350	1	1.03	1390	1295	17	17	82	6.06
54 T5HO, Type CC, Universal Voltage (120-277V)												
	QHE 2x54T5HO/UNV PSN	1.00/0.43	FP54T5HO	5000	2	1.00	10,000	9300	119	116	86	0.86
51471	20-pack (connectors/no leads)	0.94/0.40	FP54/50W/SS	5000	2	1.02	10,200	9485	112	109	94	0.94
	QHE 2x54T5HO/UNV PSN-MCL	0.89/0.38	FP54/47W/SS	4575	2	1.02	9335	8680	105	103	91	0.99
(51470)*	10-pack (with leads)	0.88/0.37	FT55DL	4800	2	0.86	8255	7680	106	105	79	0.82
		0.90/0.42	FT50DL	4300	2	1.04	8945	8320	110	108	83	0.96
		0.92/0.39	L58	5200	2	0.85	8840	8220	111	108	82	0.79
		0.82/0.35	FPC55	4000	2	0.80	6400	5950	96	94	68	0.85
	QHE 2x39/24T5HOUNV PSN	0.53/0.23	FP54T5HO	5000	1	1.05	5250	4885	62	61	86	1.72
51479	20-pack (connectors/no leads)	0.49/0.21	FP54/50W/SS	5000	1	1.05	5250	4885	58	58	91	1.81
	QHE 2x39/24T5HOUNV PSN	0.45/0.20	FP54/47W/SS	4575	1	1.03	4710	4380	53	53	89	1.94
(51478)*	10-pack (with leads)	0.49/0.21	FT55DL	4800	1	0.92	4415	4105	56	55	80	1.67
		0.51/0.22	FT50DL	4300	1	1.09	4685	4360	57	57	82	1.91
		0.48/0.21	L58	5200	1	0.87	4525	4205	57	57	79	1.53
		0.45/0.20	FPC55	4000	1	0.81	3240	3015	49	49	66	1.65
54 T5HO, Type CC, High Ambient Temperature (HT-90ºC max case temp) Universal Voltage (120-277V)												
	QHE 2x54T5HO/UNV PSN-HT	1.00/0.43	FP54T5HO	5000	2	1.00	10,000	9300	119	116	86	0.86
51476	20-pack (connectors/no leads)	0.94/0.40	FP54/50W/SS	5000	2	1.02	10,200	9485	112	109	94	0.94
	QHE 2x54T5HO/UNV PSN-HT-MCL	0.89/0.38	FP54/47W/SS	4575	2	1.02	9375	8720	105	103	91	0.99
(51475)*	10-pack (with leads)	0.88/0.37	FT55DL	4800	2	0.86	8255	7680	106	105	79	0.82
		0.99/0.42	FT50DL	4300	2	1.04	8945	8320	110	108	83	0.96
		0.92/0.39	L58	5200	2	0.85	8840	8220	111	108	82	0.79
		0.82/0.35	FPC55	4000	2	0.80	6400	5950	96	94	68	0.85
		0.53/0.23	FP54T5HO	5000	1	1.05	5250	4885	62	61	86	1.72
		0.49/0.21	FP54/50W/SS	5000	1	1.05	5250	4885	58	58	91	1.81
		0.45/0.20	FP54/47W/SS	4575	1	1.03	4690	4365	53	53	88	1.94
		0.49/0.21	FT55DL	4800	1	0.92	4415	4105	56	55	80	1.67
		0.51/0.22	FT50DL	4300	1	1.09	4685	4360	57	57	82	1.91
		0.48/0.21	L58	5200	1	0.87	4525	4205	57	57	79	1.53
		0.45/0.20	FPC55	4000	1	0.81	3240	3015	49	49	66	1.65

T5/T5HO at 35°C lamp ambient temperature
(Item Number) = Item Number/NAED in parentheses are models with leads/wires. No parenthesis = Ballasts with connectors only/no leads.*
Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.
[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

QHE Fixed Output BF 0.90 (High Efficiency Systems)

51495	QHE2x28T5/UNV PS90SC	0.46/0.20	FP28T5XP	3125	2	0.9	5625	5345	55	54	104	1.67
	10-pack	0.46/0.20	FP28T5PM/ECO	3050	2	0.9	5490	5215	55	54	102	1.67
		0.46/0.20	FP28T5	2900	2	0.9	5220	4960	55	54	97	1.67
		0.35/0.16	FP21T5	2100	2	0.92	3865	3595	42	42	92	2.19
		0.24/0.12	FP14T5	1350	2	0.95	2565	2385	29	29	88	3.28

QUICKTRONIC® High Efficiency T5 & T5HO PROStart® Systems

54 T5HO, Type CC, High Ambient Temperature (HT-90ºC max case temp) Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power 120V	Input Power 277V	System Efficacy[2] (lm/W)	BEF[1]
QHE 4x54T5HO Switchable Model												
	QHE 4x54T5HO/UNV PSN-HT-SCL	2.00/0.90	FP54T5HO	5000	4	1.00	20000	18600	233	226	88	0.44
(51480)*	10-pack (with leads)	1.77/0.76	FP54/50W/SS	5000	4	1.02	20400	18970	213	209	98	0.49
		1.75/0.75	FP54/47W/SS	4575	4	1.02	18665	17360	210	204	91	0.50
		1.82/0.78	FT55DL	4800	4	0.91	17470	16250	218	213	82	0.43
		1.90/0.81	FT50DL	4300	4	1.02	17545	16315	227	222	79	0.46
		1.87/0.89	L58	5200	4	0.87	18095	16830	223	216	84	0.40
		1.77/0.77	FPC55	4000	4	0.88	14080	13095	212	210	67	0.42
		1.50/0.65	FP54T5HO	5000	3	1.03	15450	14370	182	179	86	0.58
		1.43/0.62	FP54/50W/SS	5000	3	1.04	15600	14510	171	167	93	0.62
		1.34/0.58	FP54/47W/SS	4575	3	1.04	14275	13275	160	156	92	0.67
		1.39/0.60	FT55DL	4800	3	0.92	13250	12320	166	163	81	0.56
		1.43/0.62	FT50DL	4300	3	1.03	13285	12355	170	167	80	0.62
		1.42/0.61	L58	5200	3	0.89	13885	12910	169	166	84	0.54
		1.38/0.60	FPC55	4000	3	0.92	11040	10265	164	162	68	0.57
		1.00/0.45	FP54T5HO	5000	2	1.02	10200	9485	120	118	86	0.86
		0.95/0.42	FP54/50W/SS	5000	2	1.03	10300	9580	110	107	96	0.96
		0.88/0.39	FP54/47W/SS	4575	2	1.03	9425	8765	104	102	92	1.01
		0.92/0.41	FT55DL	4800	2	0.93	8930	8305	110	107	83	0.87
		0.94/0.42	FT50DL	4300	2	1.04	8945	8320	112	109	82	0.95
		0.93/0.41	L58	5200	2	0.88	9150	8510	112	109	84	0.81
		0.91/0.41	FPC55	4000	2	0.90	7200	6695	109	106	68	0.85
		0.51/0.25	FP54T5HO	5000	1	1.05	5250	4885	60	59	89	1.78
		0.49/0.24	FP54/50W/SS	5000	1	1.06	5300	4930	57	56	95	1.89
		0.45/0.23	FP54/47W/SS	4575	1	1.06	4850	4510	54	53	92	2.00
		0.47/0.23	FT55DL	4800	1	0.90	4320	4020	56	55	79	1.64
		0.48/0.24	FT50DL	4300	1	1.04	4470	4160	57	57	78	1.82
		0.49/0.24	L58	5200	1	0.90	4680	4350	58	57	82	1.58
		0.48/0.24	FPC55	4000	1	0.95	3800	3535	57	55	69	1.73

T5/T5HO at 35°C lamp ambient temperature

(Item Number) = Item Number/NAED in parentheses are models with leads/wires. No parenthesis = Ballasts with connectors only/no leads.*

Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

QUICKTRONIC® T5HO 347-480V Systems

High Efficiency T5HO PROStart® 347-480V Systems

54 T5HO, Type CC, High Ambient Temperature (HT-90ºC max case temp) 347-480V

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W) 347V	Input Power (W) 480V	System Efficacy[2] (lm/W)	BEF[1]
QHE 2x54T5HO Fixed Output												
	QHE 2x54T5HO/347-480 PSN-HT	0.35/0.25	FP54T5HO	5000	2	1.00	10000	9300	118	117	85	0.85
51486	20-pack (Connectors/no leads)	0.30/0.23	FP54/50W/SS	5000	2	1.00	10000	9300	109	108	93	0.93
	QHE 2x54T5HO/347-480 PSN-HT-MCL	0.30/0.22	FP54/47W/SS	4575	2	1.02	9335	8680	104	102	92	1.00
51485	10-pack (with leads)	0.32/0.23	FT55DL	4800	2	0.86	8255	7680	104	103	80	0.83
		0.33/0.24	FT50DL	4300	2	1.00	8600	8000	109	108	80	0.93
		0.31/0.22	L58	5200	2	1.00	10400	9670	108	107	97	0.93
		0.26/0.22	FPC55	4000	2	0.75	6000	5580	91	90	67	0.83
		0.18/0.14	FP54T5HO	5000	1	1.00	5000	4650	60	59	85	1.69
		0.16/0.11	FP54/50W/SS	5000	1	1.01	5050	4695	56	55	92	1.84
		0.15/0.11	FP54/47W/SS	4575	1	0.98	4484	4170	52	51	88	1.92
		0.17/0.13	FT55DL	4800	1	0.87	4175	3885	55	54	77	1.61
		0.18/0.14	FT50DL	4300	1	1.02	4385	4080	57	56	78	1.82
		0.17/0.12	L58	5200	1	0.87	4525	4205	56	55	82	1.58
		0.14/0.11	FPC55	4000	1	0.77	3080	2864	48	47	66	1.64
QHE 4x54T5HO Switchable												
	QHE 4x54T5HO/347-480 PSN-HT-SCL	0.67/0.48	FP54T5HO	5000	4	1.00	20000	18600	232	228	88	0.44
51481	10-pack (with leads)	0.63/0.45	FP54/50W/SS	5000	4	1.02	20400	18970	212	207	99	0.49
		0.59/0.43	FP54/47W/SS	4575	4	1.02	18665	17360	205	203	92	0.50
		0.63/0.46	FT55DL	4800	4	0.91	17470	16250	217	215	81	0.42
		0.66/0.48	FT50DL	4300	4	1.02	17545	16315	225	222	79	0.46
		0.62/0.45	L58	5200	4	0.97	20175	18765	214	213	95	0.46
		0.51/0.37	FPC55	4000	4	0.88	14080	13095	181	175	80	0.50
		0.51/0.37	FP54T5HO	5000	3	1.03	15450	14370	178	177	87	0.58
		0.48/0.35	FP54/50W/SS	5000	3	1.02	15300	14230	165	164	93	0.62
		0.45/0.33	FP54/47W/SS	4575	3	1.04	14275	13275	156	155	92	0.67
		0.48/0.35	FT55DL	4800	3	0.92	13250	12320	165	163	81	0.56
		0.49/0.36	FT50DL	4300	3	1.03	13285	12355	170	167	80	0.62
		0.47/0.34	L58	5200	3	0.97	15130	14075	162	162	93	0.60
		0.41/0.30	FPC55	4000	3	0.92	11040	10265	144	141	78	0.65
		0.33/0.24	FP54T5HO	5000	2	1.03	10300	9580	118	116	89	0.89
		0.32/0.24	FP54/50W/SS	5000	2	1.02	10200	9485	108	106	96	0.96
		0.30/0.23	FP54/47W/SS	4575	2	1.03	9425	8765	103	101	93	1.02
		0.31/0.24	FT55DL	4800	2	0.93	8930	8305	107	106	84	0.88
		0.33/0.24	FT50DL	4300	2	1.04	8945	8320	112	109	82	0.95
		0.31/0.23	L58	5200	2	0.97	10090	9385	106	106	95	0.92
		0.27/0.20	FPC55	4000	2	0.90	7200	6695	91	89	81	1.01
		0.17/0.13	FP54T5HO	5000	1	1.05	5250	4885	59	58	91	1.81
		0.17/0.13	FP54/50W/SS	5000	1	1.03	5150	4790	56	55	94	1.87
		0.16/0.13	FP54/47W/SS	4575	1	1.04	4760	4425	53	53	90	1.96
		0.17/0.13	FT55DL	4800	1	0.90	4320	4020	56	55	79	1.64
		0.17/0.14	FT50DL	4300	1	1.04	4470	4160	57	57	78	1.82
		0.17/0.13	L58	5200	1	0.98	5095	4740	58	57	89	1.72
		0.14/0.12	FPC55	4000	1	0.95	3800	3535	55	53	72	1.79

T5/T5HO at 35°C lamp ambient temperature
(Item Number) = Item Number/NAED in parentheses are models with leads/wires. No parenthesis = Ballasts with connectors only/no leads.*
Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.
[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

QUICKTRONIC® T5 347V Systems – CANADA

Professional Series T5 PROStart® 347V Systems – CANADA

28 T5, 347V

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
QTP 2x54T5HO Fixed Output											
49185	QTP 2x28T5/347 PS-SC (10 pack with leads)	0.18	FP28T5	2900	2	0.95	5510	5125	60	92	1.58
		0.14	FP21T5	2100	2	0.98	4115	3830	46	89	2.13
		0.10	FP14T5	1350	2	1.00	2700	2510	32	84	3.13

T5/T5HO at 35°C lamp ambient temperature
(Item Number) = Item Number/NAED in parentheses are models with leads/wires. No parenthesis = Ballasts with connectors only/no leads.*
Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.
[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

QUICKTRONIC® Professional Series T5 & T5HO PROStart® Systems

28 T5, Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
49181	QTP 2x28T5/UNV PSN	0.55/0.23	FP28T5	2900	2	1.00	5800	5395	65/63	89/92	1.59
(49180)*			FP28T5	2900	1	1.00	2900	2695	32	90	3.13
49171	QTP 1x28T5/UNV PSN	0.28/0.12	FP28T5	2900	1	1.00	2900	2695	32	90	3.13
(49170)*											

PROStart® QTP 28WT5 PSN models above also operate these lamps: FP14T5, FP21T5 & FP35T5

54 T5HO, Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
49121	QTP 1x54T5HO/UNV PSN	0.51/0.21	FP54T5HO	5000	1	1.00	5000	4650	62/60	81/83	1.67
(49120)*											
49131	QTP 2x54T5HO/UNV PSN	1.00/0.43	FP54T5HO	5000	2	1.00	10000	9300	121/118	83/85	0.85
(49130)*			FP54T5HO	5000	1	1.00	5000	4650	61	82	1.64
49142	QTP 2x54T5HO/UNV PSN 0.87"		FP54T5HO	5000	1	1.00	5000	4650	61	82	1.64
(49150)*	QTP 1x80T5HO/UNV PSN	0.74/0.32	FP80T5HO	7000	1	1.00	7000	6510	90	78	1.11
			FT80T5DL	6000	1	1.00	6000	5580	90	67	1.11

54 T5HO, High Ambient Temperature (HT-90ºC max case temp) Universal Voltage (120-277V)

QTP 2x54 T5HO Fixed Output											
49136	QTP 2x54T5HO/UNV PSN-HT	1.00/0.43	FP54T5HO	5000	2	1.00	10000	9300	121/118	85	0.85
(49135)*		0.96/0.41	FP54/50W/SS	5000	2	1.02	10200	9485	115/112	91	0.91
		0.89/0.38	FP54/47W/SS	4575	2	1.02	9335	8680	106/103	91	0.99
		0.53/0.24	FP54T5HO	5000	1	1.05	5250	4885	62/61	86	1.72
		0.50/0.21	FP54/50W/SS	5000	1	1.05	5250	4885	59/58	91	1.81
		0.45/0.21	FP54/47W/SS	4575	1	1.03	4710	4380	54/53	89	1.94
QTP 4x54 T5HO Switchable Model											
49161	QTP 4x54T5HO/UNV PSN-HTW	2.05/0.90	FP54T5HO	5000	4	1.00	20000	18600	241/236	85	0.42
		1.85/0.80	FP54/50W/SS	5000	4	1.02	20400	18970	221/215	95	0.47
		1.72/0.75	FP54/47W/SS	4575	4	1.02	18665	17360	205/200	93	0.51
		1.51/0.65	FP54T5HO	5000	3	1.00	15000	13950	183/181	83	0.55
		1.46/0.62	FP54/50W/SS	5000	3	1.04	15600	14510	175/170	92	0.61
		1.34/0.58	FP54/47W/SS	4575	3	1.04	14275	13275	161/158	90	0.66
		1.00/0.45	FP54T5HO	5000	2	1.00	10000	9300	121/118	85	0.85
		0.95/0.42	FP54/50W/SS	5000	2	1.03	10300	9580	114/111	93	0.93
		0.88/0.39	FP54/47W/SS	4575	2	1.03	9425	8765	105/104	91	0.99
		0.51/0.25	FP54T5HO	5000	1	1.00	5000	4650	61/61	82	1.64
		0.50/0.25	FP54/50W/SS	5000	1	1.06	5300	4930	60/58	91	1.83
		0.47/0.25	FP54/47W/SS	4575	1	1.06	4850	4510	55/54	90	1.96

PROStart® QTP 54 T5HO PSN models above also operate these lamps: FT55DL, FPC55, L58

T5/T5HO at 35°C lamp ambient temperature

(Item Number) = Item Number/NAED in parentheses are models with leads/wires. No parenthesis = Ballasts with connectors only/no leads.*

Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

QUICKTRONIC® Professional Series T5 & T5HO PROStart® Specialty Systems

28 T5, Extra Low Ballast Factor (~0.50 BF) Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
(49187)*	QTP 2x21T5/UNV PS51-SC	0.31	FP28T5	2900	2	0.49	2840	2645	36	79	1.36
		0.24	FP21T5	2100	2	0.51	2140	1990	29	74	1.76
		0.18	FP14T5	1350	2	0.57	1535	1430	21	73	2.71

54 T5HO Low Ballast Factor (0.80) and QUICKSTEP® (Bi-Level) T5HO Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description		Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
	QTP Fixed Output BF 0.80											
(49418)*	QTP 2x54T5HO/UNV PS80SC		0.80/0.34	FP54T5HO	5000	2	0.80	8000	7440	96/93	83/86	0.86
	QUICKSTEP Bi-Level Model (100 to 50%)											
(49419)*	QS 2x54T5HO/UNV PS80SC	(@100%)	0.80/0.34	FP54T5HO	5000	2	0.80	8000	7440	96/93	83/86	0.86
		(@50%)	0.44/0.19	FP54T5HO	5000	2	0.40	4000	3720	52/51	77/78	0.78

T5/T5HO at 35°C lamp ambient temperature
(Item Number) = Item Number/NAED in parentheses are models with leads/wires. No parenthesis = Ballasts with connectors only/no leads.*
Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.
[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

NOTES:

QUICKTRONIC® High Efficiency DL40 & SUPERSAVER® DULUX® Instant Start Systems

FT40DL (TT5) and FT40DL/SS Instant Start Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power 120V	Input Power 277V	System Efficacy[2] (lm/W)	BEF[1]
49428	QHE 1x40DL/UNV ISN-SC	0.30/0.13	FT40T5	3150	1	0.90	2835	2440	35	35	81	2.57
		0.27/0.12	**FT40DL/28W/SS**	**2800**	**1**	**1.07**	**2995**	**2695**	**32**	**32**	**94**	**3.34**
		0.22/0.10	FT40DL/25W/SS	2500	1	0.96	2400	2160	27	26	92	3.69
49429	QHE 2x40DL/UNV ISN-SC	0.56/0.26	FT40T5	3150	2	0.90	5670	4875	68	67	85	1.34
		0.54/0.24	**FT40DL/28W/SS**	**2800**	**2**	**1.07**	**5990**	**5395**	**64**	**63**	**95**	**1.70**
		0.43/0.19	FT40DL/25W/SS	2500	2	0.95	4750	4275	51	51	93	1.86
49430	QHE 3x40DL/UNV ISN-SC	0.84/0.36	FT40T5	3150	3	0.90	8505	7315	100	99	86	0.91
		0.79/0.35	**FT40DL/28W/SS**	**2800**	**3**	**1.07**	**8990**	**8090**	**95**	**94**	**96**	**1.14**
		0.62/0.27	FT40DL/25W/SS	2500	3	0.95	7125	6415	74	73	98	1.30

Ballast factor based upon 225mA nominal lamp current for FT40DL and FT40DL/25W/SS and 190mA nominal lamp current for FT40DL/28W/SS (i.e. BF higher).

QUICKTRONIC® Professional Series DULUX® DL40 PROStart® Systems

FT40DL (TT5) and FT40DL/SS PROStart® Dedicated Voltage

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumen	Mean Lumen	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
50330	QTP 1x40TT5/277 PSN-F	277	0.13	FT40T5	3150	1	0.88	2770	2385	37	75	2.38
50340	QTP 2x40TT5/120 PSN-F	120	0.63	FT40T5	3150	2	0.88	5545	4990	76	73	1.16
50350	QTP 2x40TT5/277 PSN-F	277	0.27	FT40T5	3150	2	0.88	5545	4990	73	76	1.21
50360	QTP 3x40TT5/120 PSN-B	120	0.92	FT40T5	3150	3	0.88	8315	7485	110	76	.80
50370	QTP 3x40TT5/277 PSN-B	277	0.39	FT40T5	3150	3	0.88	8315	7485	108	77	1.81

QUICKTRONIC® Professional Series DULUX® CF DE/TE Compact Fluorescent PROStart® Systems

Compact Fluorescent Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
51818	QTP 1/2x13CF/UNV DM		13W DD/E,T/E	900	1	1.00	900	775	16	56	6.25
		0.25/0.11	13W DD/E,T/E	900	2	1.00	1800	1550	29	62	3.45
51823	QTP 1/2x18CF/UNV DM		18W DD/E,T/E	1200	1	1.00	1200	1030	20	60	5.00
		0.32/0.14	18W DD/E,T/E	1200	2	1.00	2400	2065	38	63	2.63
51833	QTP 2x26CF/UNV DM		26W DD/E,T/E	1800	1	1.00	1800	1550	28	64	3.57
51898	QTP 2x26CF/UNV DM PEM	0.50/0.22	26W DD/E,T/E	1800	2	1.00	3600	3095	54	67	1.85
			32W DT/E	2400	1	0.98	2350	2025	35	67	2.80
			42W DT/E	3200	1	0.96	3070	2640	45	68	2.13
51843	QTP 2x26/32/42CF/UNV DM		26W DT/E	1800	2	1.02	3670	3155	54	68	1.89
51863	QTP 2x26/32/42CF/UNV DM PEM		32W DT/E	2400	2	0.96	4610	3965	69	67	1.39
		0.90/0.40	42W DT/E	3200	2	0.95	6080	5230	94	65	1.01
		0.53/0.23	57W DT/E	4300	1	1.00	4300	3700	62	69	1.61
		0.57/0.25	70W DT/E	5200	1	0.92	4780	4115	71	67	1.30

Also compatible with other manufacturers' equivalent 4 pin lamp types that meet ANSI specifications. Rated lamp lumens and performance data based on DULUX T/E series 4 pin lamps.

T5/T5HO at 35°C lamp ambient temperature

Ballasts operate additional lamp types. Complete performance data is in the Ballast Technology Applications & Specification Guide and at www.sylvania.com.

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).

[2] System Efficacy calculation based on lowest input power value unless otherwise noted.

Residential Series (Residential Use Only), Fluorescent Electronic CFL (T4) Systems 120V

Item Number	OSRAM SYLVANIA Description	Input Current (A)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Mean Lumens	Input Power (W)	System Efficacy (lm/W)	BEF[1]
51874	QTR 1x13T4/120V	0.19	13W DD/E T/E	900	1	0.95	855	735	12	71	7.92
51875	QTR 1x18T4/120V	0.25	18W DD/E T/E	1200	1	0.98	1175	1010	17	69	5.76
51876	QTR 1x26T4/120V	0.37	26W DD/E T/E	1800	1	0.99	1780	1535	26	68	3.81

[1] Ballast Efficiency Factor (BEF) = (Ballast Factor x 100) divided by Input Power.

QUICKTRONIC® METAL HALIDE and High Pressure Sodium Electronic Systems

MH SUPER MINI SYSTEMS

Electronic Metal Halide Systems, Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type[1]	Rated Lumens (lm)	No. of Lamps	Internal IDTP[2]	Ballast Factor (BF)	System Lumens	Input Power (W) 120V	Input Power (W) 277V	System Efficacy (lm/W)	Lamp ANSI Code
51991	QTP 1x15MH SM UNV J	120-277	0.15/0.07	15W T4	1200	1	Yes	1.00	1200	17.5	17.5	69	M186, C186
51986	QTP 1x15MH SM UNV F												
51988	QTP 1x20MH SM UNV F	120-277	0.19/0.09	20W T4	1700	1	Yes	1.00	1700	23	23	74	M156, C156
51990	QTP 1x39MH SM UNV F	120-277	0.38/0.17	39W T4.5	3400	1	Yes	1.00	3400	44	44	77	M130, C130

MH PROFESSIONAL SYSTEMS

Electronic Metal Halide Systems, Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type[1]	Rated Lumens (lm)	No. of Lamps	Internal IDTP[2]	Ballast Factor (BF)	System Lumens	Input Power (W) 120V	Input Power (W) 277V	System Efficacy (lm/W)	Lamp ANSI Code
51969	QTP 2X20MH UNV J[3]	120-277	0.38/0.16	20W T4.5	1700	2	Yes	1.00	3400	46	46	74	M156, C156
51910	QTP 1x39MH/UNV-F	120-277	0.39/0.17	39W T6	3400	1	Yes	1.00	3400	44	44	77	M130, C130
51911	QTP 1x39MH/UNV-J												
51970	QTP 2X39MH UNV F[3]	120-277	0.75/0.33	39W T6	3400	2	Yes	1.00	6800	89	89	76	M130, C130
51971	QTP 2X39MH UNV J[3]												
51912	QTP 1x70MH/UNV-F	120-277	0.67/0.29	70W T6	7000	1	Yes	1.00	7000	79	79	89	M98, M139, M143,
51913	QTP 1x70MH/UNV-J												C98, C139, C143
51914	QTP 1x100MH/UNV-F	120-277	0.96/0.41	100W E17	10,000	1	Yes	1.00	9700	110	110	91	M90, M140,
51915	QTP 1x100MH/UNV-J												C90, C191

MH PROFESSIONAL (SLIM & SQUARE) SYSTEMS

Electronic Metal Halide Systems, Mini Sized

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type[1]	Rated Lumens (lm)	No. of Lamps	Internal IDTP[2]	Ballast Factor (BF)	System Lumens	Input Power (W) 120V	Input Power (W) 277V	System Efficacy (lm/W)	Lamp ANSI Code
51959	QTP 1x20MH UNV SQ F	120-277	0.19/0.09	20W T4.5	1700	1	Yes	1.00	1700	23	23	74	M156, C156
51956	QTP 1x20MH UNV SQ J												
51961	QTP 1x39MH UNV SQ F	120-277	0.38/0.17	39W T6	3400	1	Yes	1.00	3400	44	44	77	M130, C130
51957	QTP 1x39MH UNV SQ J												
51963	QTP 1x70MH UNV SQ F	120-277	0.66/0.29	70W T6	7000	1	Yes	1.00	7000	79	79	89	M98, M139, M143, C98, C139, C143
51948☼	QTP 1X100MH UNV SLIM F	120-277	0.92/0.39	100W E17	10,000	1	Yes	1.00	10000	109	107	92/93	M90, M140, C90,
51949☼	QTP 1X100MH UNV SLIM J												C191

☼New Product. Contact OSRAM SYLVANIA for product availability.

[1] For other compatible lamp types/systems info please refer to the Product information Bulletins and/or Ballast Tech. Applications & Specification Guide and www.sylvania.com.

[2] Internal IDTP – Insulation Detection Thermal Protector.

[3] Ballast can operate 1 or 2 lamps, cap off unused leads individually for 1 lamp operation.

QUICKTRONIC® METAL HALIDE Electronic Systems

High Efficiency Metal Halide Systems

High Efficiency Electronic Metal Halide Systems (208-277V)

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type[1]	Rated Lumens (lm)	No. of Lamps	Internal IDTP[2]	Ballast Factor (BF)	System Lumens	Input Power (W) 208V	Input Power (W) 277V	System Efficacy (lm/W)	Lamp ANSI Code
51982	QHE 1x320MH 208-277V	208-277	1.71/1.29	320W EX39	37,500	1	Yes	1.00	37500	343	341	109/110	M132, M154, C154
51983	QHE 1x350MH 208-277V	208-277	1.87/1.40	350W EX39	33,000	1	Yes	1.00	33000	374	372	88/89	M131
51984☼	QHE 1x400MH 208-277V	208-277	2.12/1.58	400W E39	42,000	1	Yes	1.00	42000	428	426	98/99	M135, M155

☼New Product/Preliminary Data. Contact OSRAM SYLVANIA for product availability and detailed specifications.

[1] For other compatible lamp types/systems info please refer to the Product Information Bulletins and/or Ballast Tech. Applications & Specification Guide and www.sylvania.com.

[2] Internal IDTP – Insulation Detection Thermal Protector.

QUICKTRONIC® METAL HALIDE Dimming Electronic Systems

High Efficiency Metal Halide Dimming Systems

High Efficiency Electronic Metal Halide Systems (208-277V)

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type[1]	Rated Lumens (lm)	No. of Lamps	Internal IDTP[2]	Ballast Factor (BF)	System Lumens	Input Power (W) 208V	Input Power (W) 277V	System Efficacy (lm/W)	Lamp ANSI Code
51992	QHE 1x200MH 208-277V DIM	208-277	1.06/0.79	200W E39	21000	1	Yes	1.00	21000	215	214	98	M136, C190
51993	QHE 1x250MH 208-277V DIM	208-277	1.32/0.99	250W EX39	24000	1	Yes	1.00	24000	267	266	90	M138, M153, C153
51994	QHE 1x320MH 208-277V DIM	208-277	1.71/1.29	320W EX39	37500	1	Yes	1.00	37500	343	341	109/110	M132, M154, C154
51995	QHE 1x350MH 208-277V DIM	208-277	1.87/1.40	350W EX39	33000	1	Yes	1.00	33000	374	372	88/89	M131
51996	QHE 1x400MH 208-277V DIM	208-277	2.12/1.58	400W E39	42000	1	Yes	1.00	42000	428	426	98/99	M135, M155

[1] For other compatible lamp types/systems info please refer to the Product information Bulletins and/or Ballast Tech. Applications & Specification Guide and www.sylvania.com.

[2] Internal IDTP – Insulation Detection Thermal Protector.

Outdoor High Efficiency Electronic HID Dimming Systems

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Input Power (W) 208V	Input Power (W) 277V	System Efficacy (lm/W)	Lamp ANSI Code
51954	QT01X100MH UNV DIM	0.91/0.39	100W MH	9700	1	1.00	9700	108	107	90/91	M190, M140, C90, C140, C191
51955	QT01X150MH-HPS UNV DIM	1.35/0.58	150W MH/150W HPS	15500/16000	1	1.00	15500/16000	162	160	96/97 (99/100)	M102, C102 C142, S56
51965	QT01X200MH-HPS UNV DIM	1.78/0.76 1.82/0.77	200W MH/200W HPS	21000/22000	1	1.00	21000/22000	214 217	211 213	99/100 (101/103)	C190, S66

QUICKTRONIC® ICETRON® Inductively Coupled Electrodeless UNIVERSAL VOLTAGE SYSTEMS

ICETRON® Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Input Power (W)	System Efficacy[2] (lm/W)	BEF[1]
49758	QT 1x40ICE/UNV-T	120-277	0.36/0.16	ICE40	3000	1	1.00	3000	48/47	63/64	2.13
49753	QT 1x100 ICE/UNV-T	120-277	0.88/0.37	ICE100	8600	1	1.00	8600	106/103	75/77	0.97
49756	QT 1x100 ICE/UNV-W		0.66/0.29	ICE70	6815	1	1.05	7155	79/77	82/84	1.36
49772	QT 1x150 ICE/UNV-T	120-277	1.34/0.58	ICE150	13000	1	1.00	13000	161/156	81/83	0.64
49773	QT 1x150 ICE/UNV-W		1.28/0.54	ICE100	8600	1	1.38	11900	154/149	77/80	0.67
49789	QT1x200 ICE/UNV-T*	120-277	1.80/0.75	ICE200	15900	1	1.00	15900	216/208	74/76	0.64

Rated lamp lumens and performance data based on SYLVANIA ICETRON® lamps.
Use only with SYLVANIA ICETRON lamps (for additional lamp types contact OSRAM SYLVANIA).
[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value unless otherwise noted.
** Lamp lumens and performance data based on SYLVANIA ICE200/RCT Lamp.*

ICETRON® Dimming Systems Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumen	Mean Lumen	Input Power (W)	System Efficacy (lm/W)	BEF[1]
49759	QT1x100ICE/UNV DIM	120-277	0.95/.040									
	@100% power (10V)	208-240	0.53/0.46	ICE100	8600	1	1	8600	7125	109/106	79/81	0.94
	QT1x100ICE/UNV DIM											
	@ ~55% power (10V)	120-277	0.48/0.21	ICE100	8600	1	0.53	4560	2530	58/57	79/80	0.93
	QT1x100ICE/UNV DIM											
	@ ~60% power (STEP S2 off)	120-277	0.52/0.23	ICE100	8600	1	0.57	4900	3250	62/63	78	0.9

[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest Input Power value.)
** Performance information based on 3500K and 4100K 100W ICETRON Lamps at room temperature. Contact OSRAM SYLVANIA for 5000K operation.*

Item Number	Lamp Description	Item Number	Lamp Description	Item Number	Lamp Description	Item Number	Lamp Description	Item Number	Lamp Description
26310	ICE 40/835/RCT/2P	26087	ICE 70/835/2P	26102	ICE 100/835/2P	26152	ICE 150/835/2P	26893	ICE200/835/RCT/2P
26311	ICE 40/835/CIR/2P	26088	ICE 70/841/2P	26103	ICE 100/841/2P	26153	ICE 150/841/2P	26895	ICE200/841/RCT/2P
26312	ICE 40/841/RCT/2P	26089	ICE 70/850/2P	26105	ICE 100/850/2P	26155	ICE 150/850/2P	26897	ICE200/850/RCT/2P
26313	ICE 40/841/CIR/2P							26894	ICE200/835/CIR/2P
26314	ICE 40/850/RCT/2P							26896	ICE200/841/CIR/2P
26315	ICE 40/850/CIR/2P							26898	ICE200/850/CIR/2P

For information on the ICETRON® Lamps please reference pages 110 – 111.

QUICKTRONIC® Professional Series T12 Universal Voltage (120-277V)

40T12 Rapid Start Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Input Power (W) 120V	Input Power (W) 277V	System Efficacy[2] (lm/W)	BEF[1]
50314☼	QTP 2x40T12/UNV/RS/SC	0.62/0.27	F40T12/D30/ECO	3200	2	0.88	5630	74	74	76	1.19

96T12 Instant Start Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Input Power (W) 120V	Input Power (W) 277V	System Efficacy[2] (lm/W)	BEF[1]
50308☼	QTP 2X96T12/UNV IS	1.12/0.50	F96T12/D41/ECO	6420	2	0.86	11,040	134	130	82/85	0.66
		0.91/0.40	F96T12/CW/SS	5300	2	0.87	9220	108	106	85/87	0.82
		0.88/0.40	F72T12/CW	4500	2	0.92	8280	105	103	79/80	0.89
		0.62/0.28	F48T12/CW	2820	2	0.92	5190	73	71	71/73	1.30
		0.52/0.24	F48T12/CW/SS	2450	2	0.92	4510	62	61	73/74	1.51
		0.69/0.31	F96T12/D41/ECO	6420	1	1.01	6485	82	81	79/80	1.25
		0.56/0.27	F96T12/CW/SS	5300	1	1.10	5830	67	66	87/88	1.67
		0.55/0.26	F72T12/CW	4500	1	1.07	4815	65	64	74/75	1.67

New 50308 QTP2x96T12/UNV/IS model replaces 50318 that is discontinued

T12HO Rapid Start Universal Voltage (120-277V)

Item Number	OSRAM SYLVANIA Description	Input Current (AMPS)	Lamp Type	Rated Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Input Power (W) 120V	Input Power (W) 277V	System Efficacy[2] (lm/W)	BEF[1]
50319	QTP 2x96T12HO/UNV	1.65/0.71	F96T12HO	9050	2	0.85	15385	196	196	78	0.43
		1.38/0.60	F96T12HO/SS	8000	2	0.90	14400	164	164	88	0.55
		1.30/0.56	F72T12HO	6250	2	0.90	11250	154	154	73	0.58
		1.10/0.47	F60T12HO	5200	2	0.90	9360	132	132	71	0.68
		0.88/0.38	F48T12HO	4050	2	0.90	7290	104	104	70	0.87
		0.88/0.38	F96T12HO	9050	1	0.92	8325	104	104	80	0.88

96T12HO rated lamp lumens and performance data based on F96T12CW/HO/SS and F96T12/D41/HO series lamps.
New 50319 QTP2x96T12HO/UNV model replaces 49883 QT2x96/120HO and 49984 QT2x96/277 HO that are discontinued.

Also compatible with other manufacturer's equivalent lamp types that meet ANSI standards.
[1] Ballast Efficiency Factor (BEF) shown = (Ballast Factor x 100) divided by Input Power (Note: calculation based on lowest wattage value).
[2] System Efficacy calculation based on lowest input power value unless otherwise noted.
☼*New Product/Preliminary Data. Contact OSRAM SYLVANIA for product availability and detailed specifications.*

Magnetic Discontinued Products		Nearest Electronic Ballast Replacement	
48011	MB1x40/120RS-SRNK	T8 Upsell – 49905 ballast & lamp 21763	QTP1x32T8/UNV ISN-SC & FO32/835/XP/ECO
48120	MB1x40/277RS-SRNK	T8 Upsell – 49905 ballast & lamp 21763	QTP1x32T8/UNV ISN-SC & FO32/835/XP/ECO
48001	MB2x40/120RS-SRNK	50314	QTP2x40T12/UNV RS 4 Pack
48121	MB2x40/277RS-SRNK	50314	QTP2x40T12/UNV RS 4 Pack
48018	MB2x96/120IS-SRNK	50308	QTP2x96T12/UNV IS 3 Pack
48124	MB1x96/120IS-SRNK	50308	QTP2x96T12/UNV IS 3 Pack
48125	MB1x96/277IS-SRNK	50308	QTP2x96T12/UNV IS 3 Pack
48126	MB2x96/277IS-SRNK	50308	QTP2x96T12/UNV IS 3 Pack
48025	MB2x96/HO/120RS-SRNK	50319	QTP2x96T12HO/UNV RS 6 Pack
48027	MB2x96/HO/277RS-SRNK	50319	QTP2x96T12HO/UNV RS 6 Pack
48127	MB1x96/HO/120RS-SRNK	50319	QTP2x96T12HO/UNV RS 6 Pack
48128	MB1x96/HO/277RS-SRNK	50319	QTP2x96T12HO/UNV RS 6 Pack

NOTES:

QUICKCROSS

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA	Advance	U.L.T. Universal Lighting Technologies (formerly Magnetek)	GE	Howard
QUICKTRONIC® PROFESSIONAL 32 T8 INSTANT START UNIVERSAL VOLTAGE SYSTEMS					
Low Ballast Factor*					
49832	QTP 1x32T8/UNV ISL-SC	ICN-1P32-LW-SC	N/A	N/A	N/A
49834	QTP 2x32T8/UNV ISL-SC	ICN-2P32-LW-SC	N/A	GE-232-MV-L	EPL2/32IS/MV/MC
Normal Ballast Factor*					
49905	QTP 1x32T8/UNV ISN-SC	ICN-1P32-N ICN-132-MC	B132IUNVHP-B	GE-132-MV-N	N/A
49906	QTP 2x32T8/UNV ISN-SC	ICN-2P32-N ICN-2M32-MC	B232IUNVHP-B	GE-232-MV-N	EP2/32IS/MV/MC
49907	QTP 3x32T8/UNV ISN-SC	ICN-3P32-SC	B332IUNVHP-A	GE-332-MV-N	N/A
49908	QTP 4x32T8/UNV ISN-SC	ICN-4P32-SC	B432IUNVHP-A	GE-432-MV-N	N/A
High Ballast Factor*					
49829	QTP 1x32T8/UNV ISH-SC	N/A	N/A	N/A	N/A
49830	QTP 2x32T8/UNV ISH-SC	N/A	N/A	GE-232-MV-H	N/A
QUICKTRONIC® 59 T8 & 8-FOOT INSTANT START UNIVERSAL VOLTAGE SYSTEMS					
High Efficiency, Low Ballast Factor*					
50239	QHE 2x59T8/UNV-ISL-SC	N/A	N/A	GE259MAX-L/ULTRA	N/A
High Efficiency, Normal Ballast Factor*					
50237	QHE 2x59T8/UNV-ISN-SC	IOP-2P59-SC	N/A	GE-259-MAX-N/ULTRA	N/A
Professional Series, Normal Ballast Factor*					
49590	QTP 2X59T8/UNV ISN-SC	N/A	B259IUNVHP-A	GE-259-MV-N	EP2/59IS/MV/MC

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

QUICKCROSS

Cross Reference Guide

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA	Advance	U.L.T. Universal Lighting Technologies (formerly Magnetek)	GE	Howard
QUICKTRONIC® HIGH EFFICIENCY 32 T8 INSTANT START UNIVERSAL VOLTAGE SYSTEMS				**LAMP STRIATION CONTROL**	
Low Ballast Factor*					
49837	QHE 1X32T8/UNV ISL-SC	IOPA-1P32-LW-SC	B132IUNVEL-A	GE-132-MAX-L/ULTRA	N/A
49838	QHE2X32T8/UNV ISL-SC	IOPA-2P32-LW-N IOPA-2P32-LW-SC	B232IUNVEL-A	GE-232-MAX-L/ULTRA	EPL2/32IS/MV/SC/HE EPL2/32IS/MV/MC/HE
49839	QHE 3X32T8/UNV ISL-SC	IOPA-3P32-LW-SC	B332IUNVEL-A	GE-332-MAX-L/ULTRA	EPL3/32IS/MV/SC/HE
49840	QHE 4X32T8/UNV ISL-SC	IOPA-4P32-LW-SC	B432IUNVEL-A	GE-432-MAX-L/ULTRA	EPL4/32IS/MV/SC/HE EPL4/32IS/MV/MC/HE
Normal Ballast Factor*					
49968	QHE 1X32T8/UNV ISN-SC	IOPA-1P32-SC	B132IUNVHE-A	GE-132-MAX-N/ULTRA	N/A
49969	QHE 2X32T8/UNV ISN-SC	IOPA-2P32-SC	B232IUNVHE-A	GE-232-MAX-N/ULTRA	EP2/32IS/MV/MC/HE
49970	QHE 3X32T8/UNV ISN-SC	IOPA-3P32-SC	B332IUNVHE-A	GE-332-MAX-N/ULTRA	EP3/32IS/MV/MC/HE
49971	QHE 4X32T8/UNV ISN-SC	IOPA-4P32-SC	B432IUNVHE-A	GE-432-MAX-N/ULTRA	EP4/32IS/MV/MC/HE
Medium Ballast Factor*					
49248	QHE 2x32T8/UNV ISM-SC	N/A	N/A	GE232MAX-N+	N/A
49249	QHE 3x32T8/UNV ISM-SC	N/A	N/A	GE332MAX-N+	N/A
49491	QHE 4x32T8/UNV ISM-SC	N/A	N/A	GE432MAX-N+	N/A
High Ballast Factor*					
49919	QHE 1X32T8/UNV ISH-SC	IOPA-1P32-HL-SC	N/A	N/A	N/A
49920	QHE 2X32T8/UNV ISH-SC	IOPA-2P32-HL-SC	B232IUNVHEH-A	GE-232-MAX-H/ULTRA	EPH2/32IS/MV/MC/HE
49921	QHE 3X32T8/UNV ISH-SC	IOPA-3P32-HL-SC	B332IUNVHEH-A	GE-332-MAX-H/ULTRA	EPH3/32IS/MV/MC/HE
49922	QHE 4X32T8/UNV ISH	IOPA-4P32-HL	N/A	GE-432-MAX-H/ULTRA	N/A
QUICKTRONIC® HIGH EFFICIENCY 32 T8 INSTANT START UNIVERSAL VOLTAGE SYSTEMS – TYPE CC & LAMP STRIATION CONTROL					
Low Ballast Factor*					
49199	QHE 1X32T8/UNV ISL-SC-1	IOP-1P32-LW-SC	N/A	GE-132-MAX-L/ULTRA	N/A
49200	QHE 2X32T8/UNV ISL-SC-1	IOP-2P32-LW-SC	N/A	GE-232-MAX-L/ULTRA	N/A
49367	QHE 3X32T8/UNV ISL-SC-1	IOP-3P32-LW-SC	N/A	GE-332-MAX-L/ULTRA	N/A
49368	QHE 4X32T8/UNV ISL-SC-1	IOP-4P32-LW-SC	N/A	GE-432-MAX-L/ULTRA	N/A
Normal Ballast Factor*					
49381	QHE 1X32T8/UNV ISN-SC-1	IOP-1P32-SC	N/A	GE-132-MAX-N/ULTRA	N/A
49383	QHE 2X32T8/UNV ISN-SC-1	IOP-2P32-SC	N/A	GE-232-MAX-N/ULTRA	N/A
49385	QHE 3X32T8/UNV ISN-SC-1	IOP-3P32-SC	N/A	GE-332-MAX-N/ULTRA	N/A
49387	QHE 4X32T8/UNV ISN-SC-1	IOP-4P32-SC	N/A	GE-432-MAX-N/ULTRA	N/A
High Ballast Factor, (90°C Case Temperature)*					
49783	QHE 2x32T8/UNV ISH-HT-SC-1	IOP-2P32-HL-SC	N/A	GE-232-MAX-H/Ultra	N/A
49787	QHE 4x32T8/UNV ISH-HT-1	IOP-4P32-HL-90C-G	N/A	GE-432-MAX-H/Ultra	N/A

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

QUICKCROSS

Cross Reference Guide

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA Description	Advance	U.L.T. Universal Lighting Technologies (formerly Magnetek)	GE	Howard
QUICKTRONIC® 32 T8 INSTANT START 347 VOLT SYSTEMS – CANADA					
High Efficiency, Low Ballast Factor*					
49471	QHE 1x32T8/347 ISL-SC	GOPA-1P32-LW-SC	N/A	N/A	N/A
49473	QHE 2x32T8/347 ISL-SC	GOPA-2P32-LW-SC	N/A	GE232MAX347-L	N/A
49475	QHE 3x32T8/347 ISL-SC	GOPA-3P32-LW-SC	N/A	GE332MAX347-L	N/A
49477	QHE 4x32T8/347 ISL-SC	GOPA-4P32-LW-SC	N/A	GE432MAX347-L	N/A
High Efficiency, Normal Ballast Factor*					
49461	QHE 1x32T8/347 ISN-SC	GOPA-1P32-SC	N/A	N/A	N/A
49463	QHE 2x32T8/347 ISN-SC	GOPA-2P32-SC	N/A	GE232MAX347-N	N/A
49465	QHE 3x32T8/347 ISN-SC	GOPA-3P32-SC	N/A	GE332MAX347-N	N/A
49467	QHE 4x32T8/347 ISN-SC	GOPA-4P32-SC	N/A	GE432MAX347-N	N/A
Professional Series, Normal Ballast Factor*					
49713	QTP 2x32T8/347 ISN-SC	N/A	B232I347HP	GE232-N-347	N/A
49715	QTP 3x32T8/347 ISN-SC	N/A	B332I347HP	GE332-N-347	N/A
49717	QTP 4x32T8/347 ISN-SC	N/A	B432I347HP	GE432-N-347	N/A
QUICKTRONIC® 32 T8 INSTANT START 347 VOLT SYSTEMS – CANADA					
Standard Series, High Ballast Factor, <20% THD*					
49927	QT 2x32T8/347 ISH-SC	N/A	N/A	N/A	N/A
QUICKTRONIC® 59 T8 (8-foot) 347 VOLT SYSTEMS – CANADA					
Standard Series, Normal Ballast Factor, <20% THD*					
49217	QT 2x59/347IS	N/A	N/A	GE259-N-347	N/A
QUICKTRONIC® RESIDENTIAL 32 T8 INSTANT START 120 VOLT SYSTEMS (For Residential Use Only)					
Residential Series, Normal Ballast Factor*					
49313	QTR 2x32T8/120 ISN-SC	N/A	B232I120RES-A B232I120RES-G	GE232-120-RES	N/A
49317	QTR 4x32T8/120 ISN-SC	N/A	B432I120RES-A	GE432-120-RES	N/A

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

QUICKCROSS

Cross Reference Guide

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA	Advance	U.L.T. Universal Lighting Technologies (formerly Magnetek)	GE	Howard
QUICKTRONIC® 32 T8 PROStart® (Programmed Rapid Start) UNIVERSAL VOLTAGE SYSTEMS					
Low Ballast Factor*					
51225	QTP 2x32T8/UNV PSX-TC	IOP-2S32-LW-SC	N/A	GE232-MVPS-L	N/A
51226	QTP 3x32T8/UNV PSX-SC	IOP-3S32-LW-SC	N/A	GE332-MVPS-L	N/A
51227	QTP 4x32T8/UNV PSX-SC	IOP-4S32-LW-SC	N/A	GE432-MVPS-L	N/A
High Efficiency, Normal Ballast Factor, Type CC, Lamp Striation Control, Parallel Operation*					
51397	QHE 1x32T8/UNV PSN-MC	N/A	N/A	GE132-MVPS-N	N/A
51408	QHE 2x32T8/UNV PSN-MC	IOP-2PSP32-SC	B232PUNVHE-A	GE-232-MVPS-N	EP2/32PRS/MV/MC/HE
51413	QHE 3x32T8/UNV PSN-SC	IOP-3PSP32-SC IOP-3PSP-SC	N/A	GE-332-MVPS-N	N/A
51418	QHE 4x32T8/UNV PSN-SC	IOP-4PSP32-SC	N/A	GE-432-MVPS-N	N/A
High Efficiency, High Ballast Factor, Type CC, Lamps Striation Control, 90°C Case Temperature – Parallel Operation*					
49450	QHE 2x32T8/UNV-PSH-HT	N/A	N/A	GE-232-MV-PS-H	N/A
49453	QHE 3x32T8/UNV-PSH-HT	N/A	N/A	GE-332-MV-PS-H	N/A
49455	QHE 4x32T8/UNV-PSH-HT	N/A	N/A	GE-432-MV-PS-H	N/A
QUICKTRONIC® 86 T8HO PROStart® (Programmed Rapid Start) UNIVERSAL VOLTAGE SYSTEMS					
High Efficiency, Normal Ballast Factor, (90°C Case Temperature)*					
50304	QHE 2x86T8HO/UNV-PSN-HT-SCL	ICN-2S86	N/A	N/A	N/A

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

QUICKCROSS

Cross Reference Guide

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA Description	Advance	U.L.T. Universal Lighting Technologies (formerly Magnetek)	GE	Howard
QUICKTRONIC® T5 PROStart® (Programmed Rapid Start) UNIVERSAL VOLTAGE SYSTEMS					
High Efficiency, Normal Ballast Factor*					
51473	QHE 2X28T5/UNV PSN-NL	IOP-2S28-95-SC	N/A	GE228MVPS-A	N/A
Professional Series, Normal Ballast Factor*					
49171	QTP 1x28T5/UNV PSN	N/A	N/A	N/A	N/A
49181	QTP 2x28T5/UNV PSN	ICN-2S28	B228PUNV-C	B228PUNV-C0G1C	N/A
Professional Series, Extra-Low Ballast Factor*					
49187	QTP 2X21T5/UNV PS51-SC	N/A	N/A	N/A	N/A
QUICKTRONIC® T5HO PROStart® (Programmed Rapid Start) UNIVERSAL VOLTAGE SYSTEMS					
High Efficiency, Normal Ballast Factor*					
51471	QHE 2x54T5HO-UNV PSN	ICN-2S54 (Non-high-efficiency)	B254PUNV-D (Non-high-efficiency)	GE254MVPS-D	N/A
High Efficiency, Normal Ballast Factor, High Temperature*					
51476	QHE 2X54T5HO/UNV PSN-HT	ICN-2S54-90C (Non-high-efficiency)	B254PUNVHB-D (Non-high-efficiency)	GE254MVPS90-F	N/A
51480	QHE 4X54T5/HO UNV PSN-HT-SCL	ICN-4S54-90C-2LS (Non-high-efficiency)	B454PUNVHB-E B454PUNV-E (Non-high-efficiency)	GE454MVPS90-G GE454MVPS90-E	N/A
High Efficiency, Normal Ballast Factor, High Temperature, 347-480V*					
51486	QHE 2x54T5HO/347-480 PSN-HT	N/A	N/A	N/A	N/A
51481	QHE 4X54T5HO/347-480 PSN-HT-SCL	N/A	N/A	N/A	N/A
Professional Series, Normal Ballast Factor*					
49111	QTP 2x39-24T5HO/UNVPSN (FP39T5HO)	ICN-2S39	B239PUNV-D	B239PUNV-DOG1C	N/A
49111	QTP 2x39-24T5HO/UNVPSN (FP24T5HO)	ICN-2S24	B224PUNV-C	N/A	N/A
49131	QTP 2x54T5HO/UNVPSN	ICN-2S54	B254PUNV-D	N/A	N/A
49150	QTP 1x80T5HO/UNVPSN	ICN-1S80	ES4515K	N/A	N/A
Professional Series, Normal Ballast Factor, High Temperature*					
49136	QTP 2x54T5HO/UNV PSN HT	ICN-2S54-90C	B254PUNVHB-D	N/A	EP2/54HO/PRS/MV/90CW
49161	QTP 4x54T5HO/UNV PSN HTW	ICN-4S54-90C-2LS	B454PUNVHB-E B454PUNV-E	N/A	N/A

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

QUICKCROSS

Cross Reference Guide

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA	Advance	U.L.T. Universal Lighting Technologies (formerly Magnetek)	GE	Howard
QUICKTRONIC® PROFESSIONAL RAPID START 40T12 SYSTEMS					
Professional Series, Normal Ballast Factor*					
50314	QTP 2x40T12/UNV/RS/SC	ICN-2S40-N	B240R120HP B240R277HP	GE240RS-MV-N	N/A
QUICKTRONIC® PROFESSIONAL INSTANT START (8-foot) T12 UNIVERSAL VOLTAGE SYSTEMS					
Professional Series, Normal Ballast Factor, <20% THD*					
50308	QTP 2x96/T12/UNV/IS	ICN-2P60-SC	B260IUNVHP	GE-260IS-MV-N	N/A
QUICKTRONIC® RAPID START (8-foot) T12HO SYSTEMS					
Professional Series, Normal Ballast Factor, <20% THD*					
50319	QTP 2x96T12HO/UNV	ICN-2S110-SC	B295SRUNVHP	GE296HO-MV-N	EP2/110RS-MV

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

QUICKCROSS

Cross Reference Guide

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA	Advance	U.L.T. Universal Lighting Technologies (formerly Magnetek)	GE	Howard
QUICKTRONIC® HIGH EFFICIENCY INSTANT START DL40 (40W TT5) UNIVERSAL VOLTAGE SYSTEMS					
High Efficiency, Normal Ballast Factor*					
49428	QHE 1x40DL/UNV ISN-SC	ICN-1TTP40-SC (Non-high-efficiency)	N/A	GEC140MAX-A	N/A
49429	QHE 2x40DL/UNV ISN-SC	ICN-2TTP40-SC (Non-high-efficiency)	N/A	GEC240MAX-A	EP2/40IS-TT/MV/SC
49430	QHE 3x40DL/UNV ISN-SC	ICN-3TTP40-SC (Non-high-efficiency)	N/A	GEC340MAX-A	EP3/40IS-TT/MV/SC
QUICKTRONIC® PROFESSIONAL PROStart® (Programmed Rapid Start) DL40 (40W TT5) SYSTEMS					
Professional Series, Normal Ballast Factor*					
50330	QTP 1x40TT5/277PSN-F	VEL-1TTS40	N/A	N/A	N/A
50340	QTP 2x40TT5/120PSN-F	REL-2TTS40	N/A	GEC240MVPS-A	N/A
50350	QTP 2x40TT5/277PSN-F	VEL-2TTS40	N/A	GEC240MVPS-A	N/A
50360	QTP 3x40TT5/120PSN-B	N/A	N/A	N/A	N/A
50370	QTP 3x40TT5/277PSN-B	N/A	N/A	N/A	N/A

Item Number	OSRAM SYLVANIA	Advance	U.L.T.	GE	Robertson
QUICKTRONIC® PROFESSIONAL PROStart® (Programmed Rapid Start) CFL T4 UNIVERSAL VOLTAGE DUAL ENTRY SYSTEMS					
Professional Series, Normal Ballast Factor* CFL products run multiple lamp combinations and have various mounting/case styles – please refer to actual product specifications					
51818	QTP 1/2x13CF/UNV DM	ICF-2S13-H1-LD	C213UNV-BE C213UNV-SE	GEC213-MVPS-SE	PSM213CQMVDW
51823	QTP 1/2x18CF/UNV DM	ICF-2S18-H1-LD	C218UNV-BE C218UNV-SE	GEC218-MVPS-SE	PSM218CQMVDW
51833	QTP 2x26CF/UNV DM	ICF-2S26-H1-LD	C2642UNV-BE C2642UNV-SE	GEC226-MVPS-SE	PSM226CQMVDW
51898	QTP 2x26CF/UNV DM PEM	ICF-2S26-M1-BS ICF-2S26-M1-BS-QS	C2642UNV-BES	GEC226-MVPS-3W	PSM226CQMVDSW
51843	QTP 2x26/32/42CF/UNV DM	ICF- 2S42-M2-LD	C242UNV-BE C242UNV-SE	GEC242-MVPS-SE	PSP242TRMVDW
51863	QTP 2x26/32/42CF/UNV DM PEM	ICF-2S42-M2-BS	C242UNV-BES	GEC242-MVPS-3W	PSP242TRMVDSW

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

QUICKCROSS

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA	Advance	U.L.T. Universal Lighting Technologies (formerly Magnetek)	Lutron
QUICKTRONIC® HELIOS™ (0-10V)				
Professional Series, 54 T5/HO Dimming Systems (0-10Vdc control) – 100-1% Dimming Range – <10% THD at full output, <20% THD at full dim*				
49671	QT 1x54/120PHO-DIM	RZT-154	N/A	N/A
49672	QT 1x54/277PHO-DIM	VZT-154	N/A	N/A
49673	QT 2x54/120PHO-DIM	RZT-2S54	N/A	N/A
49674	QT 2x54/277PHO-DIM	VZT-2S54	N/A	N/A

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

QUICKCROSS

Cross Reference Guide

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA	Advance	U.L.T. Universal Lighting Technologies (formerly Magnetek)	Lutron	GE (Dedicated Voltage)
QUICKTRONIC® QUICKSTEP® (Bi-Level), UNIVERSAL VOLTAGE SYSTEMS					
High Efficiency, 32W T8*					
49157	QHE S2X32T8/UNV PSN-SC	N/A	B232PUS50-A	N/A	N/A
49158	QHE S2x32T8/UNV PSL-SC	N/A	N/A	N/A	N/A
High Efficiency, 54W T5/HO*					
49419	QS 2X54T5HOUNVPS80SC	N/A	N/A	N/A	N/A

Item Number	OSRAM SYLVANIA POWERSENSE™ (2 wire Powerline & 0-10V) (120-277V)	Advance Mark 10 (2 wire) Powerline (Dedicated Voltage)	Advance Mark 7 (0-10V) (120-277V)	U.L.T. (formerly Magnetek) Universal Lighting Technologies BALLASTAR (0-10V) (Dedicated Voltage)	U.L.T. (formerly Magnetek) Universal Lighting Technologies SuperDim (0-10V) (120-277V)	Lutron Tu-wire (Powerline) Dedicated Voltage Models Only	Lutron Eco-10 TVE Dedicated Voltage Models Only	GE UltraStart (0-10V)
QUICKTRONIC® POWERSENSE (Full Range Dimming) UNIVERSAL VOLTAGE SYSTEMS								
High Efficiency, 32W T8 (POWERSENSE® is Dual Control, competitors are 0-10VDC or Fluorescent Phase Cut)*								
50705	QTP 1x32T8/UNV DIM-TC	REZ-132-SC (120V) VEZ-132-SC (277V)	IZT- 132-SC	B132R120V5 B132R277V5	B132PUNVSV3-A ES5821B ES5835K ES5833B ES5818K	2W-T832-120-1	TVE-T832-120-1 TVE-T825-120-1 TVE-T817-120-1	GE132MVPS-N-V03
50707	QTP 2x32T8/UNV DIM-TC	REZ-2S32-SC (120V) VEZ-2S32-SC (277V)	IZT-2S32-SC	B232SR120V5 B232SR277V5	B232PUNVSV3-A ES5822B ES5836K ES5834B ES5817K	2W-T832-120-2	TVE-T832-120-2 TVE-T832-277-2	GE232MVPS-N-V03
50714	QTP 3x32T8/UNV DIM-TCL	REZ-3S32-SC (120V) VEZ-3S32-SC (277V)	IZT-3S32-SC	B332SR120V5 B332SR277V5	N/A	N/A	TVE-T832-120-3 TVE-T832-277-3	GE332MVPS-N-V03
50716	QTP 4x32T8/UNV DIM-TCL	N/A	IZT-4S32	B432P277V5H-E B432P277V5-E	N/A	N/A	N/A	GE432-MVPS-N-V03
High Efficiency, 28W T5 (POWERSENSE is Dual Control, competitors are 0-10VDC or Fluorescent Phase Cut)*								
50726	QTP 2x28T5/UNV DIM-TCL	N/A	N/A	N/A	ES5851K ES5861K ES5847K	N/A	N/A	N/A

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

QUICKCROSS

Cross Reference Guide

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA	Mount	Advance	Metrolight	Aromat/ULT/VS	Hatch
QUICKTRONIC® SUPER MINI MH						
METALARC® Metal Halide Universal Voltage – Operates Ceramic and Most Quartz MH Lamp*						
51986	QTP 1X15MH SM *4.0 x 1.3 x 1.18*	F	N/A	N/A	N/A	N/A
51988	QTP 1X20MH SM *4.0 x 1.3 x 1.18*	F	RMH-G20-K-LF *4.74 x 1.1 x 1.2*	N/A	M2012CK-7EUN-F *4.12 x 1.32 x 1.22*	MC20-1-F-120X *4.36 x 1.71 x 1.12*
51990	QTP 1X39MH SM *4.0 x 1.3 x 1.18*	F	RMH-39-K-LF *4.4 x 1.1 x 1.2*	N/A	M3912CK-7EUN-F *4.12 x 1.32 x 1.22*	MC39-1-F-120X *4.36 x 1.71 x 1.12*
51991	QTP 1X39MH SM *3.5 x 1.3 x 1.18*	J	RMH-39-K-BLS *4.1 x 1.1 x 1.2*	N/A	M3912CK-7EUN-J *3.81 x 1.32 x 1.5*	MC39-1-J-120X *3.79 x 1.71 x 1.12*
QUICKTRONIC® PROFESSIONAL MH						
METALARC® Metal Halide Universal Voltage – Operates Ceramic and Most Quartz MH Lamp*						
51969	QTP 2X20MH/UNV *4.6 x 3.4 x 1.4*	J	N/A	N/A	N/A	MC20-2-J-UNNU *4.8 x 3.62 x 1.61*
51910	QTP 1X39MH/UNV *5.0 x 3.4 x 1.4*	F	IMH-50-A-LF *5.5 x 3.6 x 1.5*	N/A	M3912-27CK-5EUF *5.51 x 3.62 x 1.57*	N/A
51911	QTP 1X39MH/UNV *4.6 x 3.4 x 1.4*	J	IMH-50-A-BLS *5.5 x 3.6 x 1.5*	N/A	M3912-27CK-5EUJ *4.81 x 3.62 x 1.57*	N/A
51970	QTP 2X39MH/UNV *5.0 x 3.4 x 1.4*	F	IMH-239-A-LF *5.5 x 3.6 x 1.5*	N/A	N/A	MC39-2-F-UNNU *5.52 x 3.62 x 1.35*
51971	QTP 2X39MH/UNV *4.6 x 3.4 x 1.4*	J	IMH-239-A-BLS *4.7 x 3.6 x 1.5*	N/A	N/A	MC39-2-J-UNNU *4.8 x 3.62 x 1.61*
51912	QTP 1X70MH/UNV *5.0 x 3.4 x 1.4*	F	IMH-70-D-LF *5.0 x 3.0 x 1.5*	N/A	M7012-27CK-5EUF *5.51 x 3.62 x 1.57*	N/A
51913	QTP 1X70MH/UNV *4.6 x 3.4 x 1.4*	J	IMH-70-D-BLS *4.6 x 3.0 x 1.5*	N/A	M7012-27CK-5EUJ *4.81 x 3.62 x 1.57*	N/A
51914	QTP 1X100MH/UNV *5.0 x 3.4 x 1.4*	F	IMH-100-D-LF *5.0 x 3.0 x 1.5*	N/A	M10012-27CK-5EUF *5.51 x 3.62 x 1.57*	MC100-1-F-UNIU *5.52 x 3.62 x 1.35*
51915	QTP 1X100MH/UNV *4.6 x 3.4 x 1.4*	J	IMH-100-D-BLS *4.6 x 3.0 x 1.5*	N/A	M10012-27CK-5EUJ *4.81 x 3.62 x 1.57*	MC100-1-J-UNIU *4.8 x 3.62 x 1.61*
For use with external IDTP						
51911	QTP 1X39MH/UNV *4.6 x 3.4 x 1.4*	J	MH-39-A-BLS-ID *4.72 x 3.62 x 1.50*	N/A	M3912-27CK-5EUJT2 *5.02 x 3.62 x 1.57*	N/A
51913	QTP 1X70MH/UNV *4.6 x 3.4 x 1.4*	J	IMH-70-A-BLS-ID *4.72 x 3.62 x 1.50*	N/A	M7012-27CK-5EUJT2 *5.02 x 3.62 x 1.57*	N/A
51915	QTP 1X100MH/UNV *4.6 x 3.4 x 1.4*	J	IMH-100-A-BLS-ID *4.72 x 3.62 x 1.50*	N/A	M10012-27CK-5EUJT2 *5.02 x 3.62 x 1.57*	N/A

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

QUICKCROSS

The smart electronics in OSRAM QUICKTRONIC® ballasts allow them to outperform the competition.

Item Number	OSRAM SYLVANIA	Mount	Advance	Metrolight	Aromat/ULT/VS	Hatch
QUICKTRONIC® SQUARE and SLIM MH						
METALARC® Metal Halide – Operates Ceramic and Most Quartz MH Lamps*						
51959	QT 1x20MH SQ *3.5 x 3.0 x 1.2*	F	IMH-G20-G-LF *3.8 x 3.0 x 1.2*	N/A	M2012CK-6EU-F *3.75 x 3.0 x 1.2*	MC20-1-F-UNNU *4.04 x 3.0 x 1.21*
51956	QT 1x20MH SQ *3.5 x 3.0 x 1.54*	J	IMH-G20-G-BLS *3.5 x 3.0 x 1.2*	N/A	M2012CK-6EU-J *3.3 x 3.0 x 1.56*	MC20-1-J-UNNU *3.45 x 3.13 x 1.27*
51961	QT 1x39MH SQ *3.5 x 3.0 x 1.2*	F	IMH-39-G-LF *3.8 x 3.0 x 1.2*	N/A	M3912CK-6EU-F *3.75 x 3.0 x 1.2*	MC39-1-F-UNNU *4.04 x 3.0 x 1.21*
51957	QT 1x39MH SQ *3.5 x 3.0 x 1.54*	J	IMH-39-G-BLS *3.5 x 3.0 x 1.2*	N/A	M3912CK-6EU-J *3.3 x 3.0 x 1.56*	MC39-1-J-UNNU *3.45 x 3.13 x 1.27*
51963	QT 1x70MH SQ *3.5 x 3.0 x 1.2*	F	IMH-70-G-LF *3.8 x 3.0 x 1.2*	N/A	M7012CK-6EU-F *3.75 x 3.1 x 1.3*	MC70-1-F-UNNU *4.04 x 3.0 x 1.21*
51946	QTP 1X70MH UNV SLIM F *5.0 x 1.8 x 1.3*	F	N/A	N/A	N/A	MC70-1F-UNNS-HB *7.74 x 1.74 x 1.47*
51947	QTP 1X70MH UNV SLIM J *5.0 x 1.8 x 1.3*	J	N/A	N/A	N/A	MC70-1J-UNNS-HB *7.74 x 1.74 x 1.47*
51948	QTP 1X100MH UNV SLIM F *5.0 x 1.8 x 1.3*	F	N/A	N/A	N/A	MC100-1F-UNNS-HB *7.74 x 1.74 x 1.47*
51949	QTP 1X100MH UNV SLIM J *5.0 x 1.8 x 1.3*	J	N/A	N/A	N/A	MC100-1J-UNNS-HB *7.74 x 1.74 x 1.47*

Item Number	OSRAM SYLVANIA	Mount	Advance	Metrolight	Universal Lighting Technologies	GE
QUICKTRONIC® HIGH EFFICIENCY MH						
Electronic Metal Halide – 208-277V						
51982	QHE 1X320MH 208-277V *8.03 x 5.9 x 1.95*	F	N/A	N/A	N/A	N/A
51983	QHE 1X350MH 208-277V *8.03 x 5.9 x 1.95*	F	N/A	N/A	N/A	N/A
51984	QHE 1X400MH 208-277V *8.03 x 5.9 x 1.95*	F	N/A	N/A	N/A	N/A
QUICKTRONIC® HIGH EFFICIENCY Dimming MH						
Electronic Metal Halide – 208-277V						
51992	QHE 1x200MH 208-277 DIM *8.03 x 5.9 x 1.95*	F	N/A	SmartHID™ 200W *8.46 x 3.43 x 2.16*	N/A	N/A
51993	QHE 1x250MH 208-277 DIM *8.03 x 5.9 x 1.95*	F	N/A	SmartHID™ 250W *8.46 x 3.43 x 2.16*	N/A	GEMH250-400M-V50 *14.91 x 14.91 x 13.35*
51994	QHE 1x320MH 208-277 DIM *8.03 x 5.9 x 1.95*	F	IZTEMH4003PS-F *11.7 x 5.0 x 2.6*	SmartHID™ 320W *8.46 x 3.43 x 2.16*	N/A	GEMH250-400M-V50 *14.91 x 14.91 x 13.35*
51995	QHE 1x350MH 208-277 DIM *8.03 x 5.9 x 1.95*	F	IZTEMH4003PS-F *11.7 x 5.0 x 2.6*	SmartHID™ 350W *8.46 x 3.43 x 2.16*	N/A	GEMH250-400M-V50 *14.91 x 14.91 x 13.35*
51996	QHE 1x400MH 208-277 DIM *8.03 x 5.9 x 1.95*	F	IZTEMH4003PS-F *11.7 x 5.0 x 2.6*	SmartHID™ 400W *8.46 x 3.43 x 2.16*	N/A	GEMH250-400M-V50 *14.91 x 14.91 x 13.35*

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

Magnetic Ballast

Simplified Solutions

OSRAM SYLVANIA is focused on helping our customers understand our products, and to simplifying their use and applications. SYLVANIA magnetic fluorescent product labels include an industry first cross-reference guide to help identify the proper ballast for replacing existing installed products. The line voltage is also clearly identified to ensure proper application, and our shipping carton labels are also color coded to indicate the voltage to help avoid misapplication even before the ballasts are out of the box.

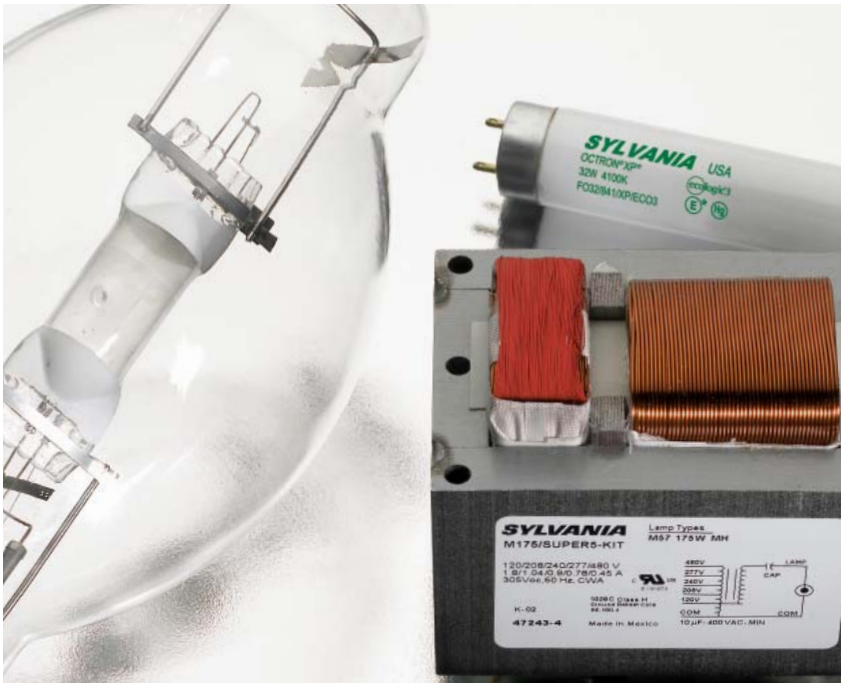
SYLVANIA magnetic HID ballast descriptions are based on the corresponding lamp description to make lamp/ballast matching and identification easier.

All fluorescent and HID carton labels also identify the corresponding lamp/ballast matching to make proper product selection as clear and as simple as possible.

Magnetic Ballasts

OSRAM SYLVANIA offers a wide range of magnetic ballast products to support our customers with SYLVANIA brand lighting products. This array of products will allow our customers a broad selection of magnetic ballasts to choose from to operate their SYLVANIA brand lamps.

- HID Magnetic SUPER 5 Kits
- Magnetic Fluorescent Sign Ballasts
- Pulse Start HID Ballasts
- F-Can HID Ballasts
- Indoor Enclosed HID Ballasts



Magnetic Fluorescent Ballasts

High quality products for most general applications – i.e. T12, T9, T8, and T5 lamps.

Magnetic Fluorescent Sign Ballasts

T12 high output magnetic ballasts for sign applications are designed to meet or exceed industry standards and requirements for the sign business.

HID Magnetic Ballast Kits

Easy to use replacement kits for the range of metal halide, pulse start metal halide, high pressure sodium and mercury lamps. Kits include core and coil, capacitors and ignitors (where required), brackets and mounting hardware.

Our SUPER 5 HID Kits have 120, 208, 240, 277 and 480V input voltage taps to reduce the number of models in inventory.

F-Can HID Ballasts

F-Can ballasts for indoor applications operate a range of metal halide, pulse start metal halide and high pressure sodium lamps with minimal noise.

METALARC® Indoor Enclosed HID Ballasts

Indoor enclosed ballasts for indoor applications where remote mounting is required.

DOE 2014 Rule Fluorescent Ballast

QUICKTRONIC® fluorescent ballasts meet requirements

The Department of Energy (DOE) 2014 ruling applies to fluorescent ballasts manufactured on or after November 14, 2014 that operate at an input voltage at or between 120 and 277 and operate at 60Hz line frequency. This rule also establishes a new ballast efficiency measurement metric known as Ballast Luminous Efficiency (BLE) as a measurement of lamp arc power. DOE 2014 requires ballasts to meet minimum performance criteria:

- Must be >.90 power factor for commercial or >.50 power factor for residential
- Residential ballasts must meet FCC 47 CFR part 18 consumer limits and be designed, labeled, and marketed only for use in residential applications
- Sign ballasts must meet UL Type 2 rating and be designed, labeled and marketed for use in outdoor signs

Exceptions to the rule:

- Dimming ballasts that dim to 50% or lower in output power
- Low frequency ballasts (magnetic) operating T8 lamps which are designed and labeled for EMI sensitive areas and are shipped in 10 or less packs
- Programmed rapid start ballasts that operate 4' bi-pin T8 lamps operating <140mA

Currently more than 98% of QUICKTRONIC ballasts comply with the DOE 2014 rule. All models have been tested under the guidelines. Products that do not comply are being re-engineered. All future model designs will be designed to qualify for the DOE 2014 rule.

MAGNETIC PRODUCT LINE

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	No. of Lamps	Lamp Types	Input Power (Watts)[1]	ADVANCE Catalog #[2]	Universal Lighting Technologies* Catalog #[2]	Valmont Catalog #[2]
T12 RAPID START								
F40T12 Rapid Start – Normal Power Factor – For Residential Use Only								
48210	MB1x40/120RES-SRNK	120	1	**F40T12,** F30T12, FC12T9, FC16T9	31	RL140TP	413CTCP	8G1075
T12/HO RAPID START								
T12/HO Sign Ballasts								
48204	MSB-12-0412-TP	120	1-2	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements.[3]	185	ASB-0412-12-BL-TP	USB-0412-12	6G3901WF
48205	MSB-24-0620-TP	120	2-4	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements.[3]	300	ASB-0620-24-BL-TP	USB-0816-14	6G3814WF
48206	MSB-24-1224-TP	120	2-4	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements.[3]	375	ASB-1224-24-BL-TP	USB-1024-14	6G3959WF
48207	MSB-24-2040-TP	120	2-4	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements. See wiring diagram for further wiring instructions.[3]	470	ASB-2040-24-BL-TP	USB-1632-24	6G3782WF
48208	MSB-46-1240-TP	120	4-6	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements. See wiring diagram for further wiring instructions.[3]	415	ASB-1240-46-BL-TP	USB-2036-46	6G3787AWF
48209	MSB-46-2448-TP	120	4-6	Any T12/HO, (800mA) lamp within quantity of lamp and lamp length requirements. See wiring diagram for further wiring instructions.[3]	540	ASB-2448-46-BL-TP	USB-2048-46	6G3942AW
T5, T8 and T12 PREHEAT START								
F8T5 Preheat Start – Normal Power Factor								
48475	MB1x8/120PH/TP/S-SRNK	120	1	**F8T5,** F4T5, F6T5	10	LSX113TP4		89G489

* Formerly MagneTek Lighting

[1] Input Power (Watts) for primary lamp type and SUPERSAVER® equivalent, (where applicable). Primary lamp type and SUPERSAVER® equivalent in bold print.

[2] This product line guide is intended as an aid for identifying comparable products for the lamp types listed as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes, wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application.

[3] Refer to SYLVANIA Sign Ballast Specification Sheet for detailed lamp configuration. Maximum Input Power (Watts) are listed.

[4] Nearest Equivalent – Performance specifications may vary, please refer to manufacturer's specifications.

[5] Due to EPAct 2005, MB1/2x48/96/HO/120RS-SRNK/IN ballast can operate only 1-lamp F96T12/HO.

More complete product information is available in the OSRAM Magnetic Ballast Catalog or at www.sylvania.com.

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

Footnotes on page 218

MAGNETIC HID

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Circuit Type	Input Power (Watts)	ADVANCE Catalog #[8]	Universal Lighting Technologies* Catalog #[8]	Venture Lighting Catalog #[8]	Howard Industries Catalog #[8,9]
METALARC® METAL HALIDE CORE & COIL BALLAST KITS								
175W Metal Halide Lamp – ANSI Code M57								
47243	M175/SUPER5-KIT	120/208/ 240/277/480	CWA	210	–	M175ML5AC3M & M175ML5AC3M-500K	–	M017581C212
47735	M175/MULTI-KIT	120/208/ 240/277	CWA	210	71A5590 & 71A5570-001D	M175MLTAC3M & M175MLTAC3M-500K	V90D6111K	M017571C211
250W Metal Halide Lamp – ANSI Code M58								
47265	M250/SUPER5-KIT	120/208/ 240/277/480	CWA	290	71A5750 & 71A5750-001D	M250ML5AC4M & M250ML5AC4M-500K	–	M025081C211
47737	M250/MULTI-KIT	120/208/ 240/277	CWA	290	71A5790 & 71A5770-001D	M250MLTAC4M & M250MLTAC4M-500K	V90D6212K	M025071C211
47049	M250/MULTI 3X4-KIT	120/208/ 240/277	CWA	294	71A5791 & 71A5771-001D	M250MLTAC3M & M250MLTAC3M-500K	V90D6211K	M025071C212
400W Metal Halide Lamp – ANSI Code M59								
47338	M400/SUPER5-KIT	120/208/ 240/277/480	CWA	458	71A6051 & 71A6051-001D	M400ML5AC4M & M400ML5AC4M-500K	–	M040081C211
47739	M400/MULTI-KIT	120/208/ 240/277	CWA	458	71A6091 & 71A6071-001D	M400MLTAC4M & M400MLTAC4M-500K	V90D6413K	M040071C211
47065	M400/480-KIT	480	CWA	458	71A6041 & 71A6041-001D	M400480AC4M	–	M040011C211
1000W Metal Halide Lamp – ANSI Code M47								
47427	M1000/SUPER5-KIT	120/208/ 240/277/480	CWA	1080	71A6552[6] & 71A6552-001[6]	M1000ML5AC5M & M1000ML5AC5M-500K	V90AM6514K	–
47744	M1000/MULTI-KIT	120/208/ 240/277	CWA	1080	71A6592[6] & 71A6572-001[6]	M1000MLTAC5M & M1000MLTAC5M-500K	V90D6514K	M0100071C212
47655	M1000/480-KIT	480	CWA	1080	71A6542[6] & 71A6542-001[6]	M1000480AC5M & M1000480AC5M-500K	–	M0100011C212
1500W Metal Halide Lamp – ANSI Code M48								
46808	M1500/MULTI-KIT	120/208/ 240/277	CWA	1605	71A6792[6] & 71A6772-001[6]	M1500MLTAC5M & M1500MLTAC5M-500K	V90D6612K	M0150071C212
47095	M1500/480-KIT	480	CWA	1605	71A6742[6] & 71A6742-001[6]	M1500480AC5M & M1500480AC5M-500K	–	M0150011C212
METALARC® METAL HALIDE PULSE START CORE & COIL BALLAST KITS								
50W Metal Halide Pulse Start Lamp – ANSI Code M110								
47007	M50/MULTI-KIT	120/208/ 240/277	HX-HPF	67	–	M50MLTLC3M & M50MLTLC3M-500K	V90D5731K	–
70W Metal Halide Pulse Start Lamp – ANSI Code M98								
47013	M70/MULTI-KIT	120/208/ 240/277	HX-HPF	95	71A5292 & 71A5292-001D	M70MLTLC3M & M70MLTLC3M-500K	V90D5832K	–
100W Metal Halide Pulse Start Lamp – ANSI Code M90								
47019	M100/MULTI-KIT	120/208/ 240/277	HX-HPF	130	71A5390 & 71A5390-001D	M100MLTLC3M & M100MLTLC3M-500K	V90D5932K	M010071C511
150W Metal Halide Pulse Start Lamp – ANSI Code M102								
47682	M150/MULTI-PS-KIT	120/208/ 240/277	HX-HPF	185	71A5492 & 71A5492-001D	M150MLTLC3M & M150MLTLC3M-500K	V90D7130K	–

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

Footnotes on page 218

MAGNETIC HID

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Circuit Type	Input Power (Watts)	ADVANCE Catalog #[8]	Universal Lighting Technologies* Catalog #[8]	Venture Lighting Catalog #[8]	Howard Industries Catalog #[8,9]
METALARC® METAL HALIDE PULSE START CORE & COIL BALLAST KITS								
150W Metal Halide Pulse Start Lamp – ANSI Code M81								
47229	M150/MULTI-KIT	120/208/240/277	HX-HPF	185	71A5490	M150MLTLC3D & M150MLTLC3D-500K	–	–
175W Metal Halide Pulse Start Lamp – ANSI Code M137 or M152								
47686	M175/MULTI-PS-KIT	120/208/240/277	CWA	208	71A5593 & 71A5593-001D	P175MLTAC3M & P175MLTAC3M-500K	V90D7210K	–
200W Metal Halide Pulse Start Lamp – ANSI Code M136								
47690	M200/MULTI-PS-KIT	120/208/240/277	CWA	232	71A5692 & 71A5692-001D	P200MLTAC3M & P200MLTAC3M-500K	V90D7310K	M020071C611
250W Metal Halide Pulse Start Lamp – ANSI Code M138 or M153								
47282	M250/SUPER5-PS-KIT	120/208/240/277/480	CWA	288	–	P250ML5AC4M	–	–
47112	M250/MULTI-PS-KIT	120/208/240/277	CWA	288	71A5792 & 71A5792-001D	P250MLTAC4M & P250MLTAC4M-500K	V90D8410K	M025071C611
320W Metal Halide Pulse Start Lamp – ANSI Code M132 or M154								
47676	M320/MULTI-PS-KIT	120/208/240/277	CWA	368	71A5892 & 71A5892-001D	P320MLTAC4M & P320MLTAC4M-500K	V90D7411K	M032071C611
350W Metal Halide Pulse Start Lamp – ANSI Code M131								
47695	M350/MULTI-PS-KIT	120/208/240/277	CWA	400	71A5993 & 71A5993-001D	P350MLTAC4M & P350MLTAC4M-500K	V90D7512K	M035071C611
400W Metal Halide Pulse Start Lamp – ANSI Code M155 or M135								
47400	M400/SUPER5-PS-KIT	120/208/240/277/480	CWA	452	–	P400ML5AC4M	–	–
47132	M400/MULTI-PS-KIT	120/208/240/277	CWA	452	71A6092 & 71A6092-001D	P400MLTAC4M & P400MLTAC4M-500K	V90D7612K	M040071C611
750W Metal Halide Pulse Start Lamp – ANSI Code M149								
47717	M750/MULTI-PS-KIT	120/208/240/277	CWA	818	71A64E2[6,7]	P750MLTAC5M & P750MLTAC5M-500K	V90D7910K	–
47409	M750/120/277/347/480-PS-KIT	120/277/347/480	CWA	818	71A64F2T[6,7]	–	V90J7910K[7]	–
1000W Metal Halide Pulse Start Lamp – ANSI Code M141								
47417	M1000/120/277/347/480-PS-KIT	120/277/347/480	CWA	1080	71A65F3T[6,7]	–	V90J7810K[7]	–
LUMALUX® HIGH PRESSURE SODIUM CORE & COIL REACTOR BALLASTS								
50W High Pressure Sodium Lamp – ANSI Code S68								
47274	LU50/120R	120	R-NPF	60	71A7807	1233-35U	–	–

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

Footnotes on page 218

MAGNETIC HID

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Circuit Type	Input Power (Watts)	ADVANCE Catalog #[8]	Universal Lighting Technologies* Catalog #[8]	Venture Lighting Catalog #[8]	Howard Industries Catalog #[8,9]
LUMALUX® HIGH PRESSURE SODIUM CORE & COIL BALLAST KITS								
50W High Pressure Sodium Lamp – ANSI Code S68								
47549	LU50/120/277-KIT	120/277	HX-HPF	66	71A7801 & 71A7801-001D	–	V90H1132K	S005023C511
70W High Pressure Sodium Lamp – ANSI Code S62								
47301	LU70/MULTI-KIT	120/208/ 240/277	HX-HPF	91	71A7991 & 71A7971-001D	S70MLTLC3M & S70MLTLC3M-500K	V90D1233K	S007071C511
100W High Pressure Sodium Lamp – ANSI Code S54								
47316	LU100/MULTI-KIT	120/208/ 240/277	HX-HPF	128	71A8091 & 71A8071-001D	S100MLTLC3M & S100MLTLC3M-500K	V90D1333K	S010071C511
150W High Pressure Sodium Lamp – ANSI Code S55								
47335	LU150/MULTI-KIT	120/208/ 240/277	HX-HPF	188	71A8192 & 71A8172-001D	S150MLTLC3M & S150MLTLC3M-500K	V90D1435K	S015071C511
LUMALUX® HIGH PRESSURE SODIUM CORE & COIL REACTOR BALLASTS								
200W High Pressure Sodium Lamp – ANSI Code S66								
47628	LU200/MULTI-KIT	120/208/ 240/277	CWA	230	71A8990 & 71A8970-001D	S200MLTAC4M & S200MLTAC4M-500K	V90D1610K	–
250W High Pressure Sodium Lamp – ANSI Code S50								
47634	LU250/SUPER5-KIT	120/208/ 240/277/480	CWA	295	71A8251 & 71A8251-001D	S250ML5AC4M & S250ML5AC4M-500K	–	S025081C211
400W High Pressure Sodium Lamp – ANSI Code S51								
47647	LU400/SUPER5-KIT	120/208/ 240/277/480	CWA	464	71A8453 & 71A8453-001D	S400ML5AC4M & S400ML5AC4M-500K	–	–
47364	LU400/MULTI-KIT	120/208/ 240/277	CWA	464	71A8493 & 71A8473-001D	S400MLTAC4M & S400MLTAC4M-500K	V90D1911K & V90D1912K	S040071C211
1000W High Pressure Sodium Lamp – ANSI Code S52								
47659	LU1000/SUPER5-KIT	120/208/ 240/277/480	CWA	1100	71A8753[6] & 71A8753-001[6]	S1000ML5AC5M & S1000ML5AC5M-500K	–	–
47389	LU1000/MULTI-KIT	120/208/ 240/277	CWA	1100	71A8793[6] & 71A8773-001[6]	S1000MLTAC5M & S1000MLTAC5M-500K	V90D2311K	S100071C211
47391	LU1000/480-KIT	480	CWA	1100	71A8743[6] & 71A8743-001[6]	–	–	S100011C211
METALARC® METAL HALIDE PULSE START F-CAN HID BALLASTS								
100W Metal Halide Pulse Start Lamp – ANSI Code M90								
47734	M100/120/277/F-CAN	120/277	HX-HPF	125	72C5381-NP & 72C5381-NP-001	11210-239C-TC	–	–
150W Metal Halide Pulse Start Lamp – ANSI Code M102 or M142								
47738	M150-PS/120/277/F-CAN	120/277	CWA	185	–	–	–	–
250W Metal Halide Pulse Start Lamp – ANSI Code M138 or M153								
47749	M250-PS/120/277/F-CAN	120/277	CWA	295	72C5783-NP & 72C5783-NP-001	–	–	–

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

Footnotes on page 218

MAGNETIC HID

Item Number	OSRAM SYLVANIA Description	Input Voltage (VAC)	Circuit Type	Input Power (Watts)	ADVANCE Catalog #[8]	Universal Lighting Technologies* Catalog #[8]	Venture Lighting Catalog #[8]	Howard Industries Catalog #[8,9]
METALARC® METAL HALIDE PULSE START F-CAN HID BALLASTS								
320W Metal Halide Pulse Start Lamp – ANSI Code M132 or M154								
47753	M320-PS/120/277/F-CAN	120/277	CWA	375	72C5882-NP & 72C5882-NP-001	P320277AFXM	–	–
METALARC® METAL HALIDE LAMP & BALLAST KITS								
Lamp & Ballast Kits include SYLVANIA METALARC® Metal Halide lamp								
64781	M400/U LAMP/SUPER5 BALLAST KIT	120/208/ 240/277/480	CWA			458		M59/S
LUMALUX® HIGH PRESSURE SODIUM LAMP & BALLAST KITS								
Lamp & Ballast Kits include SYLVANIA LUMALUX® High Pressure Sodium lamp								
67623	LU400/ECO LAMP/SUPER5 BALLAST KIT	120/208/ 240/277/480	CWA			464		S51

REPLACEMENT IGNITORS FOR OSRAM HID BALLASTS[11]:				
48153	Ignitor/MH/PS/35-150 SD	formerly	47996	Ignitor/MH/PS/50-150
48154	Ignitor/MH/PS/175-400 SD	formerly	47997	Ignitor/MH/PS/175-450
48155	Ignitor/MH/PS/750 SD	formerly	47998	Ignitor/MH/PS/750
47843	Ignitor/HPS/50-150			
47844	Ignitor/HPS/200-400			
REPLACEMENT CAPACITORS FOR OSRAM HID BALLASTS:				
47987	CAP10MFD400VAC	formerly	47952	CAP 10Mfd 400VAC
47895	CAP15MFD400VAC	formerly	47954	CAP 15Mfd 400VAC
47982	CAP24MFD480VAC	formerly	47912	CAP 24Mfd 480VAC
47988	CAP26MFD540VAC	formerly	47920	CAP 26Mfd 525VAC
47989	CAP33MFD250VAC			
47986	CAP55MFD240VAC	formerly	47942	CAP 55Mfd 300VAC

FOOTNOTES

* Formerly MagneTek Lighting

[4] NEAREST EQUIVALENT – Performance specifications may vary, please refer to manufacturers specifications.

[5] R-INT = Reactor with Integral Ignitor.

[6] OSRAM SYLVANIA'S HID Ballast is UL Class H Rated and can be used with the corresponding UL Rated fixtures only. The ADVANCE Ballast listed is Dual Rated UL Class H and N.

[7] Ballast Voltage may vary. Always check for required lamp and voltage.

[8] This product line guide is intended as an aid for identifying comparable products for the lamp types, ANSI Codes and Voltage listed as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes, wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application.

[9] Replacement Kit is indicated by a K at the end of the catalog number.

[10] A 360W Metal Halide lamp ANSI Code M59 operated on this ballast will result in approximately a 10% reduction in Input Power (Watts).

[11] Only use with the corresponding SYLVANIA HID Ballasts. Please refer to OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application.

HID Core & Coil Ballast Kits include ignitor where applicable, capacitor where applicable, mounting bracket, hardware and installation instructions.

More complete product information is available in the OSRAM Magnetic Ballast Catalog or at www.sylvania.com.

**DISCLAIMER: This cross reference guide is intended as an aid for identifying comparable products as a convenience to the user. OSRAM SYLVANIA does not warrant or guarantee the accuracy or correctness of the content. Case sizes,wiring diagrams and performance specifications may vary, please refer to manufacturers specifications. Please refer to the OSRAM SYLVANIA catalog for verification of product specifications appropriate for the application. Information in this cross reference is subject to change at any time without prior notice. Please contact 1-800-LIGHTBULB or www.sylvania.com for additional information.*

NOTES:

NOTES:

Controls

Table of Contents

ENCELIUM

Industry Leading Lighting Control with the ENCELIUM® Energy Management System

As lighting regularly accounts for nearly 35% of a commercial building's electricity consumption, it serves as a prime target to reduce overall electric usage, lower electric bills and promote sustainability. Technology-based lighting controls have been a major focus of industry wide innovation, and the latest step forward comes in the form of the ENCELIUM Energy Management System from OSRAM.

In a traditionally hardware-centric industry, the ENCELIUM® Energy Management System (EMS) was designed from the ground up as a software-based integrated lighting control and energy management system that dynamically responds to the changing characteristics of a building by providing the right amount of light when and where required. Easily scalable and able to accommodate future upgrades to newer technologies, such as LED fixtures and ballasts, the ENCELIUM EMS is a smart alternative to stand-alone lighting control components.

ENCELIUM Polaris 3D® Software and Advanced Energy Reporting Module

- Intuitive, user-friendly software that shows an interactive, 360° 3D building view
- Generates real-time energy savings data in formats ranging from kWh to dollars
- Provides users with the ability to easily adjust lighting layouts without physical rewiring of your multi-facility campus
- Change set points and time schedules for multiple zones as desired right from your web browser
- Easy detection of lighting status, consumption and energy trends from colorized lighting system data representation

ENCELIUM GreenBus II™ Communication Network

- Individual dimming control of thousands of fixtures
- Agnostic control network that can integrate non-dimming ballasts/LED drivers or DALI-based systems from third party suppliers
- Detects and locates field bus communication faults via the ENCELIUM Polaris 3D software
- BACnet® compatible for easy integration with building automation systems, such as HVAC, fire and security
- Integrates occupancy sensors, photo sensors and relay-based controls into a complete, programmable lighting control system

STAND-ALONE LIGHTING CONTROLS

Stand-alone Lighting Controls: Photosensor and control for daylight harvesting

Item Number	Ordering Abbreviation	Occupancy Sension Methong	Mounting Method	Sensor Power	Daylight Harvesting Method
45032	ELSC-DLOCIRM-TV1RCEIL/UNV	Passive, infrared, microphonics, sensing	Ceiling	line powered	photosensor with automatic calibration
45033	ELSC-DLOCIR-TV1RCEIL/UNV	Passive, infrared			
45034	ELSC-DLOCIRM-TV1RREC/UNV	Passive, infrared, microphonics, sensing	Recessed	No power pack required	
45035	ELSC-DLOCIR-TV1RREC/UNV	Passive, infrared			

Stand-alone Lighting Controls: Slide Dimmer Family

Item Number	Ordering Abbreviation	Input Voltage	Dimmer Type	Load Rating	Frame Color	Locator Light
45163	ELMC-SL3WSPFLPCWBX/120	120V	Fluorescent	600VA	White/Ivory/Light Almond	N/A
45164	ELMC-SL3WSPFLPCWBX/277	277V	Fluorescent	600VA	White/Ivory/Light Almond	N/A
45165	ELMC-SL3WHPFLPCWBX/120	120V	Fluorescent	1000VA	White/Ivory/Light Almond	N/A
45166	ELMC-SL3WHPFLPCWBX/277	277V	Fluorescent	1200VA	White/Ivory/Light Almond	N/A
45167	ELMC-SL3WTVWBX/UNV	120V/277V	0-10V	1200VA/1500VA	White/Ivory/Light Almond	Yes
45168	ELMC-SL3WELVWBX/120	120V	Electronic Low Voltage	400VA	White/Ivory/Light Almond	Yes
45171	ELMC-SL3WLED-PCWBX120	120V	LED/CFL/Incandescent	600VA	White/Ivory/Light Almond	N/A

All data shown is for primary lamp types only. Complete data is available in the QUICKTRONIC® Electronic Ballast Technology & Specification Guide and at www.sylvania.com

NOTES:

NOTES:

NOTES:

Product Catalog Glossary of Terms

Ampere A unit expressing the rate of flow of electric current.

ANSI (American National Standards Institute) The organization that develops voluntary guidelines and produces performance standards for the electrical and other industries.

Audible Noise (Sound) All fluorescent lamp ballasts produce some noise. Most OSRAM SYLVANIA brand ballasts are sound rated A (up to 75% quieter than magnetic types) and are acceptable for most applications. Care should be taken when mounting the ballast to reduce vibration.

Average Rated Life An average rating, in hours, indicating when 50% of a large group of lamps have failed, when operated at nominal lamp voltage and current; manufacturers use 3 hours per start for fluorescent lamps and 10 hours per start for HID lamps when performing lamp life testing procedures; every lamp type has a unique mortality curve that depicts its average rated life. For Display/Optic specialty lamps, average rated life refers to the operating period after which on statistical average, 50% of the lamps will perform within their specified values.

Ballast A device used with an electric discharge lamp to obtain the necessary circuit conditions (voltage, current and waveform) for starting and operating; all fluorescent and HID light sources require a ballast for proper operation. Dimming ballasts are special ballasts which, when used together with a dimmer, will vary the light output of a lamp. OSRAM Display/Optic discharge lamps are either designed for AC operation (sine wave and/or square wave with recommended operational frequencies below 1KHz) or DC operation (current regulated or power regulated). Please see OSRAM lamp specifications for correct ballast or electronic control gear selection.

Ballast Basics Ballasts have two primary functions: 1) start the lamp and 2) control operation of the lamp once it has started. High frequency electronic ballasts operate lamps more efficiently and eliminate the hum and visible flicker normally associated with standard magnetic ballasts. Electronic ballasts also typically have better power quality than magnetic ballasts.

Ballast Efficacy Factor (BEF) Relative light output (ballast factor) divided by input power (watts). Used to measure the level of efficiency of similar ballast models. For example, the OSRAM SYLVANIA QTP2X32T8/UNV ISN which has ballast factor of 0.88 and input watts of 59 (BEF = 1.49).

Ballast Factor (BF) Relative light output as compared to a reference ballast (i.e. BF of 0.90 would yield 90% of a lamp's rated lumens). OSRAM SYLVANIA offers T8 systems in many ranges of light output: Low Power (LP): (0.74-0.80) BF; Normal: (0.85- 1.0) BF; Medium: (~1.0) BF; and High Light Output (PLUS): (1.15-1.20) BF.

Ballast Fusing (See Fusing.)

Ballast Life OSRAM SYLVANIA ballasts are designed to have an average life expectancy of 60,000 hours. To maximize life, ambient temperature should be kept as low as possible. It is also important to maintain effective dissipation of heat using the lighting fixture as a heat sink for the ballast enclosure.

Ballast Losses Power consumed by a ballast that dissipates as heat instead of being converted into light. Electronic ballasts operate more efficiently than magnetic or hybrid ballasts. A typical ballast loss for a standard two lamp energy saving magnetic ballast is 12 watts, where an electronic equivalent would only be 7 watts.

Ballast Types There are three types of lighting ballasts: 1.) Magnetic: an inefficient device that uses a core and coil assembly transformer to perform the minimum functions required to start and operate the lamp; 2.) Hybrid or "low frequency electronic": essentially a magnetic ballast with a few electronic components that switch off voltage to the lamp coil once the lamp has started. A minimal increase in efficiency is obtained via more expensive magnetic core material and the absence of power to the lamp coils during operation; 3.) High frequency electronic: a ballast that operates lamps at frequencies above 20,000 Hz. Maximum efficiency is obtained through the use of electronic circuitry and optimum lamp operating characteristics.

Base The lamp base mechanically holds the lamp in place in the application. The lamp base directly or indirectly (via a cable or lead-in wires) conducts electricity from the circuit to the lamp and can be designed to dissipate heat. Lamp bases should be operated within specified temperature ranges.

Beam Angle The angle between the two directions for which the intensity (candlepower) is 50% of the maximum intensity as measured in a plane through the nominal beam centerline (center beam candlepower).

Beam Spread In any plane, the angle between the two directions in the plane in which the candlepower is equal to a stated percent of the maximum candlepower in the beam.

Black Body (Planckian Radiator) An ideal thermal radiator whose SPD curve is defined by its temperature in Kelvin and whose color coordinates lie exactly on the Planckian curve.

Brightness (See Luminance.)

Bulb Hard, soft or quartz glass enclosure, which can contain a vacuum, elemental inert gas or metal and a means of light generation (filament or electrodes).

Candela (cd) The unit of measure indicating the luminous intensity (candlepower) of a light source in a specific direction; any given light source will have many different intensities, depending upon the direction considered.

Candlepower Distribution A curve that represents the variation in luminous intensity (expressed in candelas) in a plane through the light center of a lamp or luminaire; each lamp or lamp/luminaire combination has a unique set of candlepower distributions that indicate how light will be spread.

Center Beam Candlepower (CBCP) The intensity of light produced at the center of a reflector lamp beam, expressed in candelas.

Chromaticity The aspect of color that includes consideration of its dominant wavelength and purity.

Color Rendering Index (CRI) The Color Rendering Index (CRI) measures the effect a light source has on the perceived color of objects and surfaces. High CRI light makes virtually all colors look natural and vibrant. Low CRI causes some colors to appear washed out or even to take on a completely different hue.

Color Temperature (CT) Color temperature, which is measured in Kelvin (K), indicates whether a lamp has a warm, midrange or cool color appearance. "Warm" light sources have a low color temperature (2000-3000K) and feature more light in the red/orange/yellow range. Light with a higher color temperature (>5000K) features more blue light and is referred to as "cool."

Compact Fluorescent Lamps Compact fluorescent lamps employ small diameter tubes that are bent so they begin and end in a single base. This allows them to be produced in a wide variety of configurations, greatly extending the applications for fluorescent lighting.

Correlated Color Temperature (CCT) A specification of the color appearance of a lamp, relating its color to that of a reference source, black body radiator, heated to a particular temperature, measured in degrees Kelvin (K); CCT generally measures the "warmth" or "coolness" of light source appearance.

Current A measure of the rate of flow of electricity, expressed in amperes (A).

Description (See Ordering Abbreviation.)

Design Amperes The approximate current which the lamp will draw at design volts.

Directional Lighting Illumination on the workplane or on an object predominantly from a single direction.

Display/Optic Specialty Lamps Display/Optic specialty lamps employ a variety of technologies to meet the very precise levels of performance required by the entertainment industry, science, medical and other high-tech fields.

Double-Ended Lamps that have two bases opposite one another for series electrical connection, mechanical mounting and heat dissipation.

Efficacy The rate at which a lamp is able to convert power (watts) into light (lumens), expressed in lumens per watt (LPW or lm/W). See also LPW Performance.

Electric Power The time rate of doing electrical work. The unit is the watt or kilowatt. Work is being done at a rate of 1W when a constant current of 1A is maintained through a resistance by an emf of 1V.

Electronic Control Systems (See Ballast.)

EMI/RFI Electronic Ballasts contain circuits that limit electrical noise conducted onto the power line or radiated through the air, otherwise referred to as EMI/RFI. OSRAM SYLVANIA ballasts comply with FCC 47 CFR Part 18, non-consumer limits for commercial applications. Ballasts for residential application must meet consumer limits. OSRAM SYLVANIA has a complete line of QTR electronic and magnetic ballasts for residential use.

Energy The capacity for doing work. Any body or medium which is of itself capable of doing work is said to possess energy. Energy can be expressed in foot pounds.

Filament A tungsten wire purposely positioned inside a lamp bulb, that when heated electrically generates radiation in the visible, infrared and ultraviolet ranges. Tungsten material is most often used, as it has great tensile strength, is very durable and can be heated very near its melting point without evaporating rapidly. Lamp filaments are offered in a variety of designs optimized for specific applications.

Fixture (See Luminaire.)

Floodlight A reflector lamp with a relatively wide beam pattern. Also a luminaire consisting of lamp and reflector at fixed distance providing a wide field of illumination.

Fluorescent Lamp A low pressure mercury vapor discharge light source. The electric discharge generates ultra-violet (UV) energy, which is absorbed by a phosphor and converted to visible light.

Focal Distance The distance between a lamp (light producing element) and the focal point of the reflector surrounding it. Lamp alignment can be adjusted to influence both illumination and color quality. Sometimes referred to as “working distance”.

Footcandle (fc) A unit of illuminance equal to 1 lumen per square foot.

Frequency The number of times per second that an alternating current system reverses from positive to negative and back to positive, expressed in cycles per second or hertz (Hz).

Fusing All QUICKTRONIC® ballasts contain inherent electrical protection. Although there is no need to externally fuse the ballast, should code or regulation require one, 3 amp slow blow fuses are recommended.

Glow to Arc Transition In order to achieve full rated lamp life, a ballast should start a lamp so that the time from when the lamp begins to glow to the time the lamp arc strikes should be as short as possible. OSRAM SYLVANIA instant start ballasts typically accomplish this task within 50 m/sec.

Grounding The ballast case and fixture must always be grounded. The grounding helps assure safety, proper lamp starting, and acceptable EMI/RFI performance. Install ballast in accordance with national and local electric codes.

Halogen Lamps High pressure tungsten filament lamps containing halogen gases. The halogen gases allow the filaments to operate at higher efficacies than incandescent lamps. Halogen lamps also provide brighter, whiter light with better color characteristics, longer service life and improved energy efficiency.

Harmonic An electrical frequency that is an integer multiple of the fundamental frequency; for example, if 60 Hz is the fundamental frequency, then 120 Hz is the second harmonic and 180 Hz is the third harmonic. Some electronic devices, such as ballasts or power supplies, can cause harmonic distortion, directly affecting power quality.

Hertz (Hz) A unit of frequency equal to one cycle per second; see frequency.

High Intensity Discharge (HID) Lamps Lamps in which an arc passing between two electrodes in a pressurized tube causes various metallic additives to vaporize and release large amounts of light. All HID lamps offer outstanding energy efficiency and service life. Metal halide lamps also offer good to excellent color rendering index (CRI).

Hot Ignition The restarting of a previously operating lamp shortly after turn-off. Hot ignition is a high performance feature in many OSRAM SYLVANIA discharge lamp types.

Illuminance Light arriving at a surface, expressed in lumens per unit area; 1 lumen per square foot equals 1 footcandle, while 1 lumen per square meter equals 1 lux.

Incandescent Lamp A light source using the principle of incandescence. When an electric current passes through a filament wire (usually tungsten), the heated wire glows. Filaments of standard incandescent lamps are enclosed in a vacuum or gas-filled bulb. They provide low initial cost, good color rendition and excellent optical control.

Instant Start (IS) Instant start ballasts apply high voltage across the lamp with no preheating of the cathode. This is the most energy efficient starting method for fluorescent lamp ballasting. IS ballasts use 1.5 to 2 watts less per lamp than rapid start ballast. Other IS ballast benefits typically include parallel lamp circuitry, longer remote wiring distance, easier installation due to less complicated wiring, and the lamps have the capability to start at temperatures down to -20°F (starting temperatures may vary depending on ballast/lamp types and applications, see actual specifications for details) versus 50°F for rapid start.

K-Factor A measurement that quantifies the effect of non-linear equipment, such as lighting ballasts, on an electrical system. Lighting systems should be designed so that the transformer rating is sufficient for the ballast used (typically K-factor <4). All OSRAM SYLVANIA ballasts meet this specification.

Lamp Manufactured light source, synonymous with light bulb; the three broad categories of electric lamps are incandescent, fluorescent and high intensity discharge.

Lamp Current Crest Factor (LCCF) The ratio of peak lamp current to the RMS (root mean square) lamp current. Lamp manufacturers require a LCCF of less than 1.70 in order to achieve full lamp life.

Lamp Flicker Cyclic variation in output of a light source. High frequency electronic ballasts minimize lamp flicker. Lamp flicker from magnetic ballasts may cause eye fatigue for some people.

Lamp Fuse Wire or device designed to protect a lamp from over-voltage or over-current conditions. OSRAM requires that all Display/Optic lamps be fused in their applications to prevent lamp over-powering. Certain lamps contain their own internal fuse. Please ensure lamps in your specific application are fused with respect to their power source.

Lamp Lumen Depreciation Factor (LLDF) The multiplier to be used in illumination calcula-tions to relate the initial rated output of light sources to the anticipated minimum rated output based on the relamping program to be used. (See Lumen Depreciation and Mean Lumens.)

Lens A glass or plastic element used in luminaires to change the direction and control the distribution of light rays.

Light Radiant energy that is capable of producing a visual sensation.

Light Center Length (LCL) The distance from a specified reference point on a lamp base to its light center.

Light Loss Factor (LLF) A factor used in calculating illuminance after a given period of time and under given conditions. It takes into account temperature and voltage variations, dirt accumulation on luminaire and room surfaces, lamp depreciation, maintenance procedures and atmosphere conditions. Formerly called maintenance factor.

Low Temperature Starting SYLVANIA QUICKTRONIC® QTP & QHE instant start and programmed start electronic ballasts have the capability to start fluorescent lamps at temperatures down to -20°F as well as 0°F for F40T8 & F96T8 lamps providing the following conditions are met: 1.) The ballast is operated at rated nominal line voltage. The ballast case and fixture must always be grounded. The grounding helps assure safety, proper lamp starting. Install ballast in accordance with national and local electrical codes. 2.) Ballast cannot be tandem/remote wired for low temperature starting applications. Please note, starting time may increase at low ambient temperatures. Enclosed fixtures are recommended as fluorescent lamps have reduced light output at cooler ambient temperatures. (See specifications for each model’s starting temperature rating.) SUPERSAVER® lamps start/operate at >60°F. (See specific product information bulletins for each model’s starting temperature rating.)

Lumens Per Watt (LPW) Performance The number of lumens produced by a light source for each watt of electrical power supplied to the light source. Also see Efficacy.

Lumen Depreciation The decrease in lumen output of a light source over time; every lamp type has a unique lumen depreciation curve (sometimes depicted as a lumen maintenance curve) depicting the pattern of decreasing light output. See Lamp Lumen Depreciation Factor (LLDF) and Mean Lumens.

Lumen Maintenance (See Lumen Depreciation.)

Lumens (lm) A unit of luminous flux; overall light output; quantity of light, expressed in lumens. For example, a dinner candle provides about 12 lumens and a 60-watt soft white incandescent lamp provides about 840 lumens.

Luminaire A light fixture; the complete lighting unit, including lamp, reflector, ballast, socket, wiring, diffuser and housing.

Luminaire Efficiency The ratio of luminous flux (lumens) emitted by a luminaire to that emitted by the lamp or lamps used therein.

Luminance (L) Light reflected in a particular direction; the photometric quantity most closely associated with brightness perception, measured in units of luminous intensity (candelas) per unit area (square feet or square meters).

Luminance Contrast The relationship between the luminances of an object and its immediate background.

Luminance Ratio The ratio between the luminances of any two areas in the visual field.

Lux (lx) A unit of illuminance equal to 1 lumen per square meter.

Maximum Case Temperature All OSRAM SYLVANIA electronic ballasts have a maximum allowable case temperature. Refer to product information bulletins for specific product maximum case temperatures. Applications in which the case temperature exceeds this maximum void all warranties.

Maximum Overall Length (MOL) The total length of a lamp, from top of bulb to bottom of base.

Mean Lumens Lumen output of a light source after the source has been used. Mean lumen values for fluorescent and HID lamps are typically measured at 40% of their rated lives. Most high pressure sodium and mercury lamps are measured at 50% of their rated lives. All measurements are made on ANSI reference ballasts. Mean lumens are not typically measured for incandescent and tungsten halogen lamps.

Mean Spherical Candela (MSCD) The average value of the luminous intensity of a light source in all directions. To convert MSCD to Lumens, multiply by 4p (12.57).

NAED A five-digit number used to identify a specific OSRAM SYLVANIA lamp. The NAED numbers in this catalog are labeled Product Number and should be used when ordering OSRAM SYLVANIA products. NAED is the abbreviation for National Association of Electrical Distributors.

Nanometer (nm) A unit of length equal to 10-9 meters; commonly used as a unit of wavelength.

Nominal Watts Wattage used to describe a lamp. Also see Watt.

OFR Abbreviation for “ozone free” technology. Lamps with the designation OFR do not generate ozone during operation.

Operating Position Some lamps are specified/designed to be operated in certain positions, i.e., horizontal or base up.

Ordering Abbreviation Provides a shorthand description of the lamp, using a unique code which can be used when ordering a lamp if the Product Number is not known. An example would be: CF15EL/R30/830/MED, which translates to a 15-watt Soft White DULUX® EL reflector electronic self-ballasted compact fluorescent lamp with an R30 reflector, 82 CRI, 3000K color temperature and a medium screw base.

PAR Lamps Pressed aluminized reflector lamp, with the outer bulb formed from two pressed glass parts that are fused or sealed together. PAR lamps may be incandescent, halogen or HID types.

Parallel vs. Series Wiring configurations for ballasts. Ballasts with parallel lamp circuitry have the benefit of companion lamps remaining lit, even if one of the lamps operated by the ballast should fail. Systems with series lamp wiring, should one lamp fail, all lamps operated on the series ballast will turn off (magnetic ballasts and many rapid start electronic types).

Power Factor A measure of the effectiveness with which an electrical device converts volt-amperes to watts; devices with power factors (>0.90) are “high power factor” devices.

Preheat A class of fluorescents requiring a starter, which allows the lamp and filaments to be properly heated before allowing the ballast to supply the correct current flow.

Product Number (See NAED.)

Programmed Rapid Start (PRS) A method of starting fluorescent lamps where cathode heat is applied prior to lamp ignition, then removed or reduced once the lamp has ignited. PROStart® ballasts maximize the number of lamp starting cycles while maintaining energy efficiency. This is the preferred mode of lamp starting for applications with occupancy sensors and several on/off cycles per day. PROStart systems will strike and restrike reliably in cold conditions starting as low as -20°C.

Rapid Start (RS) Rapid start ballasts apply a low filament voltage to preheat the cathodes. Simultaneously, a starting voltage (lower than that used in instant start) is also applied to strike the arc. When the cathodes are hot enough, the lamp will strike. The filament voltage continues to be applied throughout the operation of the lamp. Rapid start ballasts appear to have a slight turn on delay compared to instant start. They will typically not be able to start lamps reliably under 50°F.

Reference Ballast A ballast specially constructed to have certain prescribed characteristics for use in testing electric-discharge lamps and other ballasts. Reference ballasts are typically defined by ANSI.

Reflector A device used to redirect the light by the process of reflection. Display/Optic reflector lamps utilize ellipsoidal (converging light rays) or parabolic (collimating light rays) reflectors. Dichroic coated reflectors are designed to reflect visible light and pass through unwanted infrared wavelengths.

Resistance (R) A measure of resistance to flow of current, expressed in ohms (V).

Safety Ballasts should be installed and operated in compliance with the National Electric Code (NEC), Underwriters Laboratories Inc. (UL) requirements, and all applicable codes and regulations. Since it is possible to come in contact with potentially hazardous voltages, only qualified personnel should perform ballast installation. All installation, inspection and maintenance of lighting fixtures should be done with the power to the fixture turned off.

Shielding A general term to include all devices used to block, diffuse or redirect light rays, including baffles, louvers, shades, diffusers and lenses.

Single-Ended Lamps having a single lamp base or point of electrical connection.

Spectral Power Distribution (SPD) A curve illustrating the distribution of radiant power produced by the lamp, at each wavelength across the spectrum.

Spotlight A luminaire using halogen/incandescent or a high intensity discharge (HID) lamp that produces a narrow beam angle designed to illuminate a specifically defined area. It can also be called a reflector lamp.

TCLP Test (Toxicity Characteristic Leaching Procedure) Federal EPA regulations (RCRA of 1990) have defined a TCLP test to determine whether wastes are to be treated as hazardous or non-hazardous.

Total Harmonic Distortion (THD) A measure of the distortion of an electrical wave form. Excessive THD (defined by ANSI as greater than 32%) may cause adverse effects to the electrical system. <20% THD ballasts are fine for most applications. However, in buildings with neutral problems caused by high THD loads such as computers, printers, DC supplies, etc., the <10% THD products can help reduce the overall % of Total Harmonic Distortion.

Transient Protection OSRAM SYLVANIA ballasts meet ANSI 62.41 Category A. This helps ensure immunity to electrical disturbances such as power line transients, and temporary line voltage dropouts, surges and sags.

Trigger Start A circuit used to eliminate the starter and start the preheat lamp almost instantly. In this circuit each electrode is connected to a separate winding in the ballast so that the electrode is continuously heated.

Tungsten Halogen Cycle A regenerative cycle of tungsten and halogen atoms, which, when incorporated into the design of halogen light sources, prevents blackening of the lamp envelope during life.

Voltage (V) A measure of electrical potential, expressed in volts (V). Voltage is the “force” that pushes electrical current through a conductor.

Watt (W) A unit of electrical power equal to 1 joule per second. Lamps are rated in watts to indicate power consumption. Also see Nominal Watts.

Wavelength (l) Distance between two successive points of a periodic wave; the wavelengths of light are typically expressed in nanometers (nm), or billionths of a meter. (See Focal Distance.)

www.sylvania.com

United States
OSRAM SYLVANIA
Headquarters
100 Endicott Street
Danvers, MA 01923 USA
1-800-LIGHTBULB
www.SYLVANIA.com

Canada
OSRAM SYLVANIA LTD./LTÉE
Headquarters
2001 Drew Road
Mississauga, ON L5S 1S4
1-800-LIGHTBULB
www.SYLVANIA.com

Mexico
OSRAM MEXICO
Headquarters
Tultitlan/Edo DeMexico
011-52-55-58-99-18-50
www.osram.com.mx

For Orders and General Information in the United States:

National Customer Service and Sales Center
18725 N. Union Street
Westfield, IN 46074

PRODUCT-CAT-LAMP-BALLAST-2014

Distributor:

Techni-Lux
www.techni-lux.com

Phone: 407-857-8770
Fax: 407-857-8771
Email: sales@techni-lux.com