Lighting the way to energy efficiency

A Guide to Energy Efficient Lighting Solutions
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30% of the energy used in our buildings is wasted. Together, we can change that.
You might be surprised to learn that buildings—not cars, trucks or airplanes—are the single largest contributor to global warming in the U.S. and Canada. Buildings account for almost half of both countries’ annual energy consumption and greenhouse gas emissions. Globally, the percentage is even higher; 76% of all power plant-generated electricity is used just to operate buildings.

Just think; if the energy efficiency of commercial and industrial buildings were improved by just 10%, we could save $20 billion in energy costs.1 In terms of reducing pollution, that’s the equivalent to the emissions from 30 million cars annually!

By adopting and enforcing intelligent energy codes, we can assure the energy efficiency of new buildings. But what about improving the energy efficiency of existing buildings? That’s a much bigger—and more immediate—opportunity.

1 Source: EPA, Reference Natural Resources Canada  
When it comes to energy savings, it pays to think small.

Quite often, building owners overlook their stock of small- to medium-size buildings when considering energy-efficient projects. They may think that payback cycles are too long, or that the opportunities are too small to significantly impact the bottom line.

Consider this. Buildings of less than 100,000 square feet account for 98% of the commercial building stock in the United States. In fact, if every small building reduced energy use even by a minimal amount, the reduction in U.S. greenhouse gas emissions would be enormous.

Lighting can make a huge difference.

As you can see from the pie chart below, lighting accounts for almost 38% of the electrical energy used in commercial office buildings. It can offer a prime opportunity for reducing energy costs.

Is it time for an “Energy Diet”? 

In a Wall Street Journal article, “Business Goes on an Energy Diet,” an energy efficiency analyst for the International Energy Agency (IEA) said that, “Heavy industry could reduce energy used by 18% to 36% just by applying best practices and available technologies…light industries like retailing and the food sector could cut energy use by an even greater percentage—up to 50%—because they haven’t always made efficiency a priority.”

In the same article, Charles Zimmerman, Walmart’s Vice President of Prototype and New Format Development stated, “Energy efficiency is one of the best investments we can make.” He added that, “Walmart will meet a target to reduce energy usage by 20% in existing stores by 2012,” and indicated that “…many of the savings will come through lighting innovations.”
It’s surprisingly easy to be green. Here’s how to get started.

There are many good reasons to use energy-efficient lighting systems. Here are a few of them:

- **Lower operating costs.** Reduced energy usage directly translates to your bottom line. The long-term savings can quickly repay the minimal capital investment.

  Additionally, incentives may be available to building owners to help offset the financial investment in new energy-efficient systems. These include allowing owners to use the money saved on energy bills to pay for the new system, utility incentive programs and government tax incentive programs.

- **Increased property value.** Whether you occupy or rent the building you own, upgrading a new or existing facility with energy-efficient systems increases its resale value.

- **Attract energy conscious tenants.** One example would be Federal agencies. Effective December 19, 2010, no Federal agency shall enter into a contract or lease space in a building that has not earned the ENERGY STAR® label in the most recent year.* Energy efficient systems help buildings achieve the ENERGY STAR rating in addition to lowering operating costs.

- **Improved workplace conditions.** Many of today’s lighting systems deliver more comfortable illumination—and provide employees with the ability to select light levels that are suitable and comfortable for specific tasks. In many cases, employees chose lower light levels, which translate into greater energy savings.

- **Be seen as a better neighbor.** Installing energy-efficient systems provides an opportunity to identify your company as an environmentally conscious member of the community.

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**Payback, Rate of Return, Return on Investment and Increase in Building Asset Value**

These are the standard measures used to evaluate whether energy efficient retrofits should be done. For building owners that plan to retain ownership of their buildings for three years or more, payback and return on investment (ROI) are considered.

Example: If an energy efficient lighting system upgrade costs $100,000 and the annual savings is $40,000, then the payback is 2.5 years ($100,000−$40,000 = 2.5 years). A payback of 3 years or less is the generally accepted standard by which lighting upgrades are evaluated. By dividing 100 by the payback time of 2.5 years, we determine that the rate of return (ROR) is 40% (ROR=100÷2.5 = 40%).

Several formulas are available for calculating ROI. They typically take into account factors such as life of the product, tax depreciation rate and the effective income tax rate. In the example above, the return on investment is 44.6%. In general, a well-run corporation produces an annual return on investment in the 20 to 25% range, so an ROI of 44.6% is excellent.

Rental property owners and facility management companies anticipating the sale of property will be interested in increased asset value. Anna Stark, program manager for the U.S. Environmental Protection Agency’s ENERGY STAR Commercial Properties, Climate Protection Partnerships Division, explains that if a company avoids spending $0.20 on utilities, it increases its operating income by the same amount. She says that the current capitalization rate of rental building asset value is increased by $2.86 ($0.20 ÷ 0.07 = $2.86) or 14.3 times the savings. In the example above with a $100,000 investment, a $40,000 annual savings and using the 7% capitalization rate suggested by Stark, the asset increase is $571,428—a substantial increase in building resale value.

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*Sec. 435. Leasing of the Energy Independence and Security Act of 2007*
For a new building
Talk with your design firm about the energy-saving options available to you. These design professionals will be able to identify the products that will provide the most appropriate energy saving solutions for you. The information included in the Lighting Products section of this brochure will help identify SYLVANIA options to discuss with your design team.

For an existing building
1. Start by finding a qualified individual or company to conduct an energy survey and audit of your building to evaluate your existing systems and review your current energy bills. Be sure to identify any known problems or shortcomings of your existing lighting system, as well as goals for your new system.

   Electrical wholesale distributors can help direct you to a suitable service provider or some may have in-house expertise. Energy service companies (ESCOs) and lighting service companies such as SYLVANIA Lighting Services have employees trained to provide this service.

2. Once the survey is complete and you’ve documented your goals and concerns, the service company can develop and present an energy-efficient lighting proposal. This may include:
   • An energy use analysis that identifies your opportunities for energy savings
   • Recommended lighting system solutions
   • Financing options, information about utility, government and other financial incentive programs
   • A proposal for recycling existing lighting system components

3. Carefully evaluate the proposal. If it meets your energy saving and financial goals, get the project underway as soon as possible. The sooner the new, energy-efficient lighting system is installed, the sooner you will enjoy the benefits.

U.S. Federal Tax Incentives
The Federal government supports and encourages making existing and new buildings more energy efficient. The Energy Policy Act of 2005 (EPAct 2005) provides for a commercial building tax deduction (CBTD) for building or system upgrades that meet certain energy-efficiency requirements. Improvements to lighting systems are normally the easiest to qualify thanks to the wide range of innovative, energy-efficient systems available today. The CBTD end date was extended to December 31, 2013 when the Emergency Economic Stabilization Act of 2008, H.R. 1424 was signed into law in October 2008. If you have not already taken advantage of this program, you now have a new opportunity to qualify for up to $1.80 per square foot if all three systems qualify – interior lighting, HVAC and hot water and building envelope. If only one of the three systems qualify, the amount is up to $0.60 per square foot. (For more information, please visit www.sylvania.com/Energy/EPACT/.)

Federal legislation sets goals for “Net-Zero-Energy” commercial buildings
The Energy Independence and Security Act of 2007, signed into law on December 19, 2007, established the “Net-Zero-Energy” Commercial Buildings Initiative to drive improved efficiency of commercial buildings in the US. With today’s available lighting technologies, building owners can be well on the way to achieving our nation’s energy saving goals.

SYLVANIA Lighting Services
With over 40 years of experience, SYLVANIA Lighting Services (SLS) provides turnkey energy management solutions for interior and exterior lighting systems, as well as expert preventative maintenance programs. With lighting professionals and an extensive service fleet, SLS offers complete project management from locations in the U.S., Canada and Puerto Rico. Please visit www.sylvania.com/sls for more information.
Sustainability—meeting our needs today without compromising the resources future generations will need—touched everything we do as a company. It’s all about reducing environmental impact, a commitment that goes beyond our products to include how the products are used, how they are manufactured and how they are distributed. It even extends to the design of “greener” buildings.

Lighting the way to a greener future.
Building greener

“Green building” incorporates environmentally responsible practices into the design of new construction and the renovation of existing buildings. A number of whole building rating systems have been developed to guide designers, architects and builders who incorporate green building strategies. Three of the most widely used rating systems are the US EPA’s ENERGY STAR® for buildings and the US Green Building Council’s LEED® (Leadership in Energy and Environmental Design) and the ANSI/ASHRAE/USGBC/IES 189.1 “Standard for the Design of High-Performance Green Buildings”.

SYLVANIA lighting system solutions can help you achieve and exceed many of the criteria for each of these rating systems, including energy efficiency, controllability of systems, low mercury content and lamp recycling.

Controllability

Using only as much light as is needed when it is needed is key to reducing energy consumption. One popular control device is the occupancy sensor, which simply turns the lights off when no one is in the room. Another type of control uses multiple lighting circuits that allow the occupants to use some or all of the light sources, depending on the availability of natural light, task requirements or occupant needs.

More sophisticated dimming ballasts and control devices let occupants or building management systems control overall energy use by smoothly dimming or increasing light levels as required.

Another option available to building owners allows for power reduction during peak load times. This type of system allows the building owner to avoid peak load charges. It also allows the electrical utility to reduce energy consumption to help avoid brownouts and blackouts during excessively high peak load times.

To maximize energy savings and increase energy performance, OSRAM SYLVANIA offers a selection of QUICKTRONIC® electronic ballasts, including the PowerSHED™ demand response ballasts and the POWERSENSE® dimming ballasts, that interface seamlessly with a building’s control systems and offer superior reliability. Many of these products are featured in the product section of this brochure.

Recycling

Due to their design and operating requirements, fluorescent and high intensity discharge lamps contain small amounts of mercury. OSRAM SYLVANIA has eliminated lead from linear fluorescent lamps manufactured in Versailles, Kentucky and HID lamps manufactured in Manchester, NH, as well as from most electronic ballasts. However, other products may contain small amounts of lead. While the mercury and lead content in an individual product is negligible, the improper disposal of large quantities of lamps or devices does add to the environmental burden. Older magnetic ballasts may contain PCBs, which were found to have harmful effects on health. These ballasts are no longer manufactured in North America. Ballasts containing PCBs must be disposed of properly.

The best way to responsibly dispose of these products is to recycle them, and OSRAM SYLVANIA has made that process as easy as possible. Visit www.sylvania.com/recycle where you can purchase pre-labeled and pre-paid return shipment Recycle-Paks® from Veolia Environmental Services. Fill the boxes with your unbroken, spent lamps or ballasts and ship them directly to Veolia for recycling.

Many electrical wholesale distributors also offer recycling programs. To learn more about state, local and provincial lamp recycling regulations and contacts, governmental regulations and to locate recyclers in your area, go to www.lamprecycle.org, a website sponsored by the Lamp Section of the National Electrical Manufacturers Association (NEMA).
At OSRAM SYLVANIA, saving energy begins at home.

When the OSRAM SYLVANIA North American headquarters building in Danvers, Massachusetts was remodeled in 2004, we took full advantage of the energy-saving benefits of our own products.

Although the ASHRAE/IESNA 90.1-2001 energy code allowed 1.3 watts per square foot for office areas, the new lighting system designed for our office spaces uses an average of only 1 watt per square foot—the standard set by the 2004 and 2007 versions of the 90.1 code. The system also utilizes bi-level switching and occupancy sensors, so employees only use the amount of electric light needed and lights are turned off when spaces are unoccupied.

We also upgraded the lighting in two of our 500,000 square foot distribution centers. Both of these projects involved a complete conversion from metal halide systems to SYLVANIA PENTRON® T5HO fluorescent systems employing motion sensors which turn lighting off in unoccupied aisles.

Lighting upgrades have also been completed at our St. Marys and York, Pennsylvania plants. Both projects paid for themselves—in energy savings and Federal commercial building tax deductions—in about 18 months. Similar retrofit projects were also completed in 2008 in manufacturing facilities in Winchester and Versailles, Kentucky, Manchester, New Hampshire and Central Falls, Rhode Island.
Imagine a fictitious specialty food store company; let’s call them High Performance Foods*. They have a headquarters office building, a nearby distribution center and a chain of retail stores. Like all businesses, they’re interested in saving money. And like many, they’re committed to reducing their environmental footprint.

With some help from OSRAM SYLVANIA, here’s how High Performance Foods went about achieving both goals.

### Headquarters Office Building

**Headquarters Signage**

The large pylon sign is internally lighted with three 250W metal halide lamp and ballast systems operating at 870 watts; the sign has to be relamped every two years.

The interior of the sign was retrofitted with 150W, 100,000 hour ICETRON® electrodeless fluorescent systems in 5000K color temperature.

**Energy savings: 36%**

The 100,000-hour ICETRON system life means relampings will be avoided for many years; the higher color temperature and color rendering index of the ICETRON lamps dramatically improved the sign’s appearance.

**Parking Area**

There are 15 twin-head pole-mounted fixtures, each equipped with a 400W metal halide lamp and ballast.

Replacement luminaires were installed using METALARC® 320W Pulse Start metal halide lamps and QUICKTRONIC® electronic HID ballasts.

**Energy savings: 24%**

### Entrance

There are 10 walkway bollards, each containing a 100W metal halide lamp and ballast and operating at 130W.

New bollards were installed, each containing 60 watts of LEDs, reducing total wattage from 1.3kW to 0.6kW.

**Energy savings: 54%**

### Lobby

Existing lighting consists of 24 incandescent recessed downlight luminaires with 90W tungsten halogen lamps mounted in the 14-foot ceiling; two decorative pendant-mounted bowl luminaires, each with four 40W long compact fluorescent lamps, each operating at 150W.

New metal halide recessed luminaires were installed, each with a METALARC® POWERBALL® 20W ceramic metal halide lamp and QUICKTRONIC electronic HID ballast.

The pendant bowl luminaires were updated with QUICKTRONIC High Efficiency (QHE) electronic ballasts and 28W DULUX® L SUPERSAVER® T5 compact fluorescent lamps.

**Energy savings: 67%**

### Conference Rooms

Each of the 20 conference rooms is illuminated by incandescent recessed downlights containing 65W BR30 incandescent lamps, on three separate dimming circuits.

The eight downlights over the conference table were replaced with four 4-foot pendant indirect luminaires using two PENTRON® PREMIER™ 28W T5 ECOLOGIC® lamps per luminaire and a QUICKTRONIC POWERSENSE® T5 dimming ballast controlled by a power-line, 2-wire fluorescent dimmer. The 16 perimeter downlights were relamped with DULUX EL 15W dimmable, self-ballasted compact fluorescent lamps.

**Energy savings: 69%**

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*For the purposes of this article, High Performance Foods is a fictitious name and does not represent an actual company.*
Open Office Spaces 5

The eight office spaces have a total of 60, 18-cell parabolic recessed fluorescent troffer luminaires mounted with typical 8’ x 10’ on-center spacing. Each luminaire contains three 32W T8 lamps and normal power factor, instant start ballasts. The recessed troffers were replaced with indirect pendant-mounted luminaires with 12-foot spacing between rows, each using two high performance 32W OCTRON® XPS® ECOLOGIC® lamps per 4-foot section; the two rows closest to the windows incorporate QUICKTRONIC® POWERSENSE® high efficiency, T8 dimming ballasts connected to a photo sensor control for daylight harvesting. The two inside rows of luminaires not connected to the daylight harvesting system use QUICKTRONIC High Efficiency instant start electronic ballasts.

Energy savings: 21%

As an added benefit, overhead glare decreased and lighting uniformity in the cubical offices in the space improved significantly.

Private, Enclosed Offices 6

Each of the 260 offices are illuminated by two 3-lamp, 2’ x 4’ parabolic recessed troffers with 32W T8 lamps and instant start electronic ballasts, switched via a manual on/off wall switch. New, higher efficiency, low glare volumetric luminaires were installed, each using two PENTRON® PREMIER™ 28W ECOLOGIC® T5 lamps and a QUICKTRONIC QUICKSTEP® bi-level switching ballast. Manual on/off wall switches were replaced with bi-level, passive infrared occupancy sensors.

Energy savings: 62%

Miscellaneous Spaces 7

Storage rooms, the mail room, data storage areas, etc. are typically lit by 3-lamp parabolic recessed troffers having older generation 32W T8 lamps and normal power factor, instant start ballasts. Luminaires were retrofitted with a new, high performance T8 system using 32W OCTRON XPS ECOLOGIC lamps and QUICKTRONIC PSX programmed rapid start, low power ballasts. Occupancy sensors were also installed.

Energy savings: 50%

Additional energy savings are achieved through energy use controls. The facility utilizes a building lighting shut-off system to prevent any interior lighting from being left on once the building is vacated. Headquarters signage, entrance and parking area lighting energy use is also managed by shutting off the signage and walkway bollards between the hours of midnight to 6 a.m. and parking area lighting is reduced by about 45% by turning off the lighting on 7 poles from midnight to 6 a.m.
**Retail Specialty Food Stores**

**Exterior Signage 1**
There are 100 stores, each with illuminated signs containing 200 feet of red neon tubing.
Each sign was retrofitted with an equal length of SYLVANIA HF®Chain X3 160 Red LED modules with OPTOTRONIC® power supplies.

**Energy savings: 75%**

**General Illumination 2**
General illumination in each store is provided by 264 8-foot long 4-lamp ceiling-mounted luminaires in rows running perpendicular to the shelving. Each luminaire was equipped with four 4-foot F34T12 energy-saving lamps and two energy-saving magnetic ballasts.

Luminaires were retrofitted with four OCTRON® XP® SUPERSAVER® ECOLOGIC® 28W lamps and one QUICKTRONIC® High Efficiency low ballast factor, instant start ballast.

**Energy savings: 42%**

**Display/Accent Lighting 3**
Each store utilizes 131 incandescent luminaires with 90W halogen PAR lamps with 9° and 25° beam spreads.
Luminaires were replaced with HID luminaires containing METALARC® POWERBALL® Ceramic metal halide 20W lamps and QUICKTRONIC electronic HID ballasts operating at a system wattage of 23W.

**Energy savings: 74%**
*Not only did the system save 67W per luminaire, but lamp life was extended from 2,500 hours to 12,000 hours.*

**Freezer Doors 4**
Each store has 60 refrigerator/freezer doors utilizing a total of 72 L58 (F58T8) fluorescent systems mounted vertically in the door frames operating 24 hours per day. Each of the fluorescent systems was replaced by an LEDstixx® lighting system operating on OPTOTRONIC® power supplies.
Reducing the lighting load reduced the cooling requirements resulting in an annual savings of 27,000 kWh from lighting and compressor load reductions. Maintenance costs were also reduced due to the 50,000 hour LED life rating.

**Energy savings: 57% from lighting**

**Distribution Facilities**

**Exterior 1**
Twenty 175W metal halide wallpacks located on the exterior of the distribution center provide safety and security lighting and illumination of the loading docks.
The wallpacks were relamped with METALARC SUPERSAVER 150W metal halide lamps.

**Energy savings: 12%**

**Staging and Aisles 2**
The 280,000 square foot distribution center used 250W metal halide luminaires for aisle lighting and 400W metal halide luminaires for the open staging area.
The metal halide systems were replaced with energy-efficient PENTRON® T5HO fluorescent lamps with QUICKTRONIC PROStart® electronic ballasts; selection was based on 35,000 hour lamp life, low system wattages and compatibility with occupancy sensors. The 250W metal halide aisle luminaires were replaced with 2-lamp T5HO luminaires with occupancy sensors. The 400W metal halide luminaires in the open staging area were replaced with 4-lamp T5HO luminaires. There are skylights located in the roof above this area. QUICKTRONIC switchable ballasts were installed in these luminaires, making it possible to operate only two of the lamps in each luminaire when sufficient sunlight is available through the skylights.

**Energy savings: 94%**
Lamp and ballast systems and new luminaires are considered capital investments. High Performance Foods was able to take advantage of a variety of incentives offered by the local electrical utility company for converting both interior and exterior lighting systems to more energy efficient systems. Many of the spaces that were improved also qualified for the U.S. Federal EPAct 2005 commercial building tax deduction for interior spaces that met the energy efficiency requirements. For example, the general illumination in the retail stores provided by the new system using OCTRON® T8 fluorescent lamps and QUICKTRONIC® electronic ballasts operates at 0.91 W/sq. ft. That beats the 2.1 W/sq. ft. for general sales areas allowed by the EPAct reference standard ASHRAE/IESNA 90.1-2001 by 56%, exceeding the 40% they had to achieve in order to qualify. All IESNA recommended light levels are met and the bi-level switching requirement is met because the original system already switched every other fixture on separate circuits. You could say that High Performance Foods got their cake, the icing and ice cream, too. The “cake” was the reduced operating costs they realized by reducing their energy usage. The “icing” was the incentive package they received from the utility company that reduced their capital expense. The “ice cream” was the commercial building tax deduction they received on their federal taxes in the year in which the new lighting systems were put into service. You could say they got the “sprinkles”, too. As a general rule, for every three watts of lighting load you save, you save a watt of air conditioning load. Thanks to the extensive reductions in interior lighting load, less AC was needed resulting in additional savings for High Performance Foods.

### For High Performance Foods, the energy savings added up quickly!

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SYLVANIA Energy Efficient Lighting Solutions

At OSRAM SYLVANIA, we consistently develop and market products that are at the cutting edge of lighting technology and we back them up with the highest levels of customer support and service. For over 40 years we have led the way in introducing products that deliver energy savings to our customers while reducing their impact on the environment. This product section highlights many new and existing products that further our commitment to reducing energy consumption and reducing CO₂ emissions.

Environmentally preferable SYLVANIA ECOLOGIC® products

SYLVANIA products designated as ECOLOGIC are designed to pass the U.S. Environmental Protection Agency’s Toxicity Characteristic Leaching Procedure (TCLP) tests for hazardous waste determination. Products meeting the TCLP test may be declared “universal waste” in many states, easing the administrative, storage and transportation burdens for these products. (Check your state and local governments for the most current regulations.) In Canada, products may be classified differently.

ECOLOGIC lamps have little or no lead in their glass or bases and reduced amounts of mercury in the high intensity discharge (HID) and fluorescent lamp types. Many of these products also offer additional “green” features such as energy efficiency and long life, and packaging made from recycled or recyclable materials.

With close to 1,000 products meeting our strict ECOLOGIC guidelines and bearing the distinct “ECO” designation, OSRAM SYLVANIA offers a wide range of environmentally preferable lamp types. You’ll find them featured in the product section of this brochure.

Our plan for environmental sustainability in lighting encompasses:

1. Longer lamp life to reduce the use of natural resources
2. Reduced use of hazardous materials including lead and mercury
3. Lamps with higher efficacy to avoid over-lighting spaces with too many lamps
4. Energy efficiency and controllability of systems to reduce greenhouse gas emissions
5. Recycling to keep mercury and lead from the waste stream

Today, we are the only US lighting company producing completely lead-free glass for linear fluorescent lamps.
ULTRA RT4 and RT6

The SYLVANIA ULTRA RT4 and RT6 are fully integrated, downlight modules that fit in 4" and 6" recessed luminaires and are optimized for new construction and retrofit applications. Installation is done quickly and easily in most standard four and six-inch insulated (IC), Airtight (AT) and non-insulated housings.

Features:
- Direct power retrofit to 120V
- Dimmable down to 20%
- No glare and pleasing aesthetic front end
- Offers superior optical design for maximum light output
- Up to 17x longer life—reduced energy consumption and maintenance requirements when compared to traditional incandescent & halogen downlights
- Meets California Title 24 fixture requirements for high-efficiency luminaires
- RoHS Compliant
- ETL Certified
- ENERGY STAR® Qualified

SYLVANIA LED Emergency Lighting
By SentryLight®

Compact, concealed, aesthetically pleasing and vandal-resistant, SYLVANIA emergency lighting equipment provides bright illumination during any power failure situation. Quick and easy to install in the wall or ceiling, these reliable emergency lighting fixtures are perfect for retrofit and new construction applications.

Features:
- Meets most interior emergency lighting codes
- Front cover plate is customizable and can be painted or wallpapered to blend with décor
- Self-contained battery and remote options
- Vandal-resistant and ADA compliant enabling installation at any height
- 120 and 277 VAC input options
- Illumination duration of 120 minutes on battery power
- UL and CSA listed
Commercial Grade LED T8 Lamp

SYLVANIA’s Commercial Grade LED T8 replacement lamps are an energy saving LED alternative to traditional T12 or T8 fluorescent lamps. The Commercial Grade LED T8 replacement lamp has a dedicated internal driver and is designed to be a direct fluorescent replacement, requiring minimal fixture modification.

Features:
- CCT: 2700K, 3000K, 3500K, 4100K, 5000K
- Beam angle: 120°
- Universal voltage 120-277V (integrated internal driver)
- G13 medium bi-pin base
- 40,000 hour life rating
- Reduces energy consumption up to 30%
- No warm-up time, instant-on with full light output and stable lamp to lamp color
- Vibration and impact resistant
- Powered at one end to ensure safety standards are met

LEDstixx® Lighting System for Refrigeration

The SYLVANIA LEDstixx Lighting System for Refrigeration features optical properties optimized for vertical freezer and refrigerator case doors. The LEDstixx system provides uniform illuminance on merchandise, good color rendering, energy savings, and maintenance cost avoidance.

Features:
- Excellent illuminance uniformity
- Significant energy savings
- High CRI
- 50,000 hour life rating
- Maintenance savings
- 4, 5, and 6 foot lengths
- No UV or IR emissions
- Mercury free
- Optimized optics design for various depth cases
LEDstixx® Lighting System for Display

The LEDstixx Lighting System for Display offers a unique LED lighting solution featuring performance optimized for display case or undercabinet lighting applications. The LEDstixx Lighting System for Display product is available in eight lengths and three light output options. Mounting and connection accessories are also available to simplify installations in both new case construction and in retrofit applications.

Features:
- Available in low, medium, and high output versions
- 50,000 hour life rating
- High CRI
- Fine ANSI binned LEDs
- Ideal LED source and spacing to maximize sparkle in jewelry case applications
- Unique reflector system to eliminate glare
- Self locking 75° angular rotation feature
- Reverse polarity protected

LEDstixx Festoon

The LEDstixx Festoon product offers a unique LED lighting solution optimized for numerous applications including cove, undercabinet, undershelf, accent, and display lighting. It can be used as a simple retrofit for some 12VAC incandescent/xenon festoon products or for new construction applications.

Features:
- Significant energy savings using 90% less power than traditional festoon lamps
- Operates on existing 12V AC systems
- Simple to install
- High efficacy, up to 50LPW
- High CRI
- 50,000 hour life rating
- CCT: 2700K, 3000K, and 4000K
The HF²Chain X3 LED Lighting System is an ideal and cost-effective solution for signage. Compared to traditional neon and fluorescent sources, the HF²Chain X3 LED Lighting System reduces manufacturing costs, increases sign durability and allows more versatility in sign design.

Features:
- Versatile product configurations:
  - X3-L180 White and X3-L160 Red feature high lumen output
  - X3-L120 White and X3-L120 Red feature standard lumen output
- Batwing Lens Design – 155 degree beam angle promotes uniform surface illumination over a broad face area
- Higher light output with fewer modules per foot
- IP66 Rated to protect against dust, moisture and condensation
- No additional accessories or heat sinking required
- Can be cut between each module
- 3M™ adhesive foam backing for use as an installation aid
- UL Classified

DLM700, DLM800WF & DLM1100

SYLVANIA DLM700, DLM800WF and DLM1100 Directional Light Modules are fully integrated and optimized lighting sub-systems that combine the advantages of LED technology with an innovative optical design: a controlled light distribution away from the glare zone, with no pixelation. Available in 2700K, 3000K, 3500K, 4000K and 5000K, the DLM1100 offers up to 58 LPW.

Features:
- Designed for 5” or 6” aperture downlights
- Beam angle reduces glare and provides controlled light
- Directional light module allows for efficient light transmission with no wasted light
- Compact size allows for design flexibility
- Constant current module
- UL Recognized
- RoHS Compliant
Distributed Array

The Distributed Array lighting module offers a high efficiency alternative to fluorescent light sources in general illumination applications. The remarkable board design is incredibly efficient, consuming just 11 watts of power. The modules generate an even and diffuse light that reduces the need for multiple optical layers. The precise layout of the LEDs make it thermally independent, requiring no heat sinking. The Distributed Array simplifies luminaire design, seamlessly going where most linear fluorescents currently exist. The Distributed Array is exclusively paired with the OPTOTRONIC® OT50 320mA power supply.

Features:
- CCT: 3000K, 3500K and 4000K
- 2” x 9” boards can be combined to light nominal 2’ and 4’ fixtures
- High efficiency with 100+ LPW
- 48 LEDs driven at low-current
- Thermally independent
- 80+ CRI
- Up to 50,000 hour service life when temperature at Tc point is maintained at 85°C
- 0 – 10V dimming
- RoHS Compliant
- UL Recognized

DL700 & DL1100

The DL700 and DL1100 are Directional Light Engines that consist of high-brightness LEDs on a metal core board (MCB). These light engines can be designed into a variety of housings in combination with optical components and can be used in a wide spectrum of applications including downlighting, track lighting, area lighting, and accent lighting. Available in 2700K, 3000K, 3500K, 4000K and 5000K, the DL1100 offers up to 78 LPW.

Features:
- High lumen package generates plenty of light from a small source
- Stand-alone light engine can be combined into a variety of housings
- Comes pre-wired with connectors to simplify installation
- Conformally coated for use in damp locations
- Reverse voltage protection protects LEDs from damage that can result from incorrect wiring

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- Reverse voltage protection protects LEDs from damage that can result from incorrect wiring
**HF²Narrow Stick**

The SYLVANIA HF²Narrow Stick LED module is an innovative module comprised of a closely packed array of small, discrete LEDs on boards under 5/8" wide. The module is designed to provide highly uniform, intense illumination and is available in 4" and 10". The module is also available in half power versions of each length and color temperature.

**Features:**
- Dense LED spacing creates a virtual linear light source
- Available in various lengths (4" & 10") in full and half output versions
- 85 CRI
- CCT: 2700K, 3000K, 3500K, 4000K
- Dimmable
- 24V light engine
- UL Recognized
- RoHS Compliant
- Emerge Alliance Registered

**HF²Power Stick**

Developed as an alternative to linear fluorescent, the HF²Power Stick is a hi-flux LED module for high brightness lighting design. Available in 18.5" and 5.5" lengths, the HF²Power Stick can be used in a variety of applications including general illumination, task lighting, and cove lighting. Different board lengths can be paired or laid end-to-end to meet a variety of lighting design specifications.

**Features:**
- High brightness
- Available in two lengths: 5.5" and 18.5"
- CCT: 3500K and 4000K
- Dimmable
- RoHS Compliant
- UL Recognized
- Up to 50,000 service life with proper thermal management
- 24V light engine

**LINEARlight POWER FLEX**

The new, improved LINEARlight POWER FLEX LED linear module is the brightest, most efficient product in our flexible product line providing 2880-3560 lumens and 40-50LPW. It is available in 2700K, 3000K, 4000K and 5400K color temperatures with a CRI >80 and mimics traditional fluorescent lighting.

**Features:**
- High lumen output
- Flexible circuit board with self-adhesive backing
- Can be cut every six LEDs
- Dimmable
- Entire light engine can be powered from a single feed
- 24V light engine
- UL2108 Recognized
LINEARlight Flex® TOPLED®

The LINEARlight Flex TOPLED LED linear module is available in low brightness (ECO®) and high brightness (Architectural) versions in 19.5-ft and 32.5-ft reels, respectively. Both versions are offered in 2700K, 3000K, 4000K and 5400K color temperatures with a CRI of >80 in addition to selected monochromatic red, yellow, green and blue colors.

Features:
- Flexible circuit boards with self-adhesive backing
- Two versions available:
  - Architectural version: high lumen output, longer runs
  - Half-power version: lower wattage and more monochromatic color variations
- Can be cut every one or two LEDs at designated cut points
- Dimmable
- Entire reel can be powered from a single feed
- 24V DC light engine
- UL2108 Recognized

OPTOTRONIC® High Efficiency 40W 350mA LED Power Supply

The OT40W High Efficiency power supply is the most efficient power supply of its class in the industry. This Non-Class 2 power supply allows an increased number of LEDs to be driven from a single power supply. With 40W of delivered power, the OT40W High Efficiency is an adequate option for supporting the majority of SSL applications.

Features:
- High efficiency: >90%
- CFL ballast style housing
- Dimmable with 0-10V dimmers
- Low harmonic distortion - THD<10%
- Exceptional, smooth and flicker-free dimming performance
- UL8750 Recognized
- Damp location rated

OPTOTRONIC 96W 24V, 0-10V Dimmable Power Supply

The OT96W Dimmable 24V LED Power Supply is the smallest 96W dimmable power supply in the industry. This power supply’s compact housing reduces physical constraints and improves fixture design flexibility. The OT96W Dimmable power supply is designed with integral dimming circuitry resulting in fewer components in an overall lighting system. Fewer components in a system translate to less energy consumption and energy savings. Its dimmable function allows for additional energy savings up to 90%.

Features:
- 24V DC constant voltage output
- Dimmable
  - 0-10V works great with popular fluorescent dimmers
- Universal input voltage 120-277V
- Safety – Class 2 Rated
  - Ease-of-mind for higher wattage loads
- Familiar T8 fluorescent ballast housing
  - 9.5" L x 1.68" W x 1.17" H
- UL1310 and UL48 Recognized
- Damp location rated
## Solid State Lighting - Outdoor Fixtures

### Gas Canopy

The SYLVANIA ProPoint™ LED Gas Canopy luminaire is an environmentally preferable, cost-effective, maintenance-free alternative to traditional lighting. The Gas Canopy lights are extremely durable and maintain virtually all their luminosity for the 10+ year life of the luminaire, significantly reducing replacement and maintenance costs.

**Features:**
- Saves up to 73% of energy usage
- Extremely durable; up to 70,000 hour life with no bulb replacement
- Light uniformity increases visibility in a variety of locations
- Assembled in USA
- RoHS Compliant
- IP65 Rated

### Parking Garage

The SYLVANIA ProPoint LED Parking Garage luminaire provides exceptional quality illumination, stability, durability, and cost savings. Unlike conventional lighting, there is negligible light loss over the life of the Parking Garage luminaire. It provides reliable, durable, maintenance-free illumination for more than 10 years. The luminaire also meets LEED requirements for energy reduction credits.

**Features:**
- Up to 75% of energy savings
- 70,000 hour rated life with 70% lumen maintenance
- RoHS Compliant
- Highly durable; lasts 6 times longer than traditional HID lighting
- Assembled in USA
- UL1598 Listed for US and Canada
- IP65 Rated
SYLVANIA ProPoint™ LED Post Top luminaires are the environmentally preferable, cost-effective, maintenance-free alternative to traditional lighting. The LED Post Top luminaires are extremely durable and maintain virtually all their luminosity for the 10+ year life of the light, significantly reducing replacement and maintenance costs.

Features:
• Up to 68% energy savings
• Environmentally friendly
• 70,000 hour rated life with 70% lumen maintenance
• RoHS Compliant
• Assembled in USA

SYLVANIA ProPoint ™ LED Shoebox luminaire is your best choice for energy-efficient, environmentally preferable lighting for parking, area and site lighting. SYLVANIA ProPoint Shoebox luminaires meet all LEED requirements for light pollution reduction credits by minimizing light trespass, reducing sky-glow, and reducing the impact on nocturnal environments.

Features:
• Up to 62% energy savings
• Environmentally friendly
• 50,000 hour rated life with 70% lumen maintenance
• RoHS Compliant
• Assembled in USA
LED Lamps

ULTRA HD Professional Series
LED PAR Lamps

These premium PAR lamps from OSRAM SYLVANIA provide the best in color quality and light output that the market has to offer. They are offered in PAR38, PAR30LN, PAR30 and PAR20 families. These lamps offer energy savings in life and reduced wattage. SYLVANIA ULTRA HD Professional Series lamps capture the essence of color quality to enhance and beautify whatever is highlighted. Optimal LED binning and selection, within 3-step MacAdam Ellipse, provide true color quality along with precise light intensity and accuracy. With no UV or IR radiation, SYLVANIA ULTRA HD lamps are the perfect lamp for illuminating pictures, paintings or merchandise—without harmful effects. There is no need to sacrifice light quality for the sake of energy savings or long life.

Features:
- Reduce energy consumption up to 80%
- Mercury free and RoHS Compliant
- Excellent color quality
- Tight color consistency between lamps within a 3-step MacAdam Ellipse
- 95 CRI, 3000K CCT
- R9>60; rendering shades of red vividly and naturally
- Dimmable
- Use indoor or outdoor (UL Damp)

ULTRA LED PAR Lamps

SYLVANIA ULTRA LED PAR20, PAR30LN and PAR38 lamps are dimmable and can be used in a variety of applications—both indoors and outdoors. They are offered in 3000K and 2700K color temperatures. Our PAR38 and PAR30 lamps are offered in a variety of beam angles. The lack of UV and IR radiation make these lamps ideal for highlighting merchandise or artwork as discoloration and fading of materials is minimized.

Features:
- Reduce energy consumption up to 84%
- Mercury free and RoHS Compliant
- Last 10 times longer than halogen lamps
- 85 CRI for good color rendering
- Use indoor or outdoor (UL Damp)
Sylvanian ULTRA LED A19, G25, BR30 & BR40 lamps are also dimmable and can be used in a variety of applications. All lamps in the ULTRA LED Series feature no warm-up time, instant-on with full light output and stable color. They’re RoHS compliant and UL Listed.

**Features:**
- Dimmable
- Reduce energy consumption up to 82%
- CRI>80
- 2700K to 3000K CCT
- Medium base for easy replacement
- Mercury free and RoHS Compliant
- Use indoor or outdoor (UL Damp)

The D6 Area Light LED Retrofit Kit is an alternative to high-intensity discharge lamps up to 175W at pole heights up to 30 feet. The directional light distribution of high power LEDs allows the delivery of light only where needed, reducing wasted light and minimizing light trespass and uplight.

**Features:**
- Reduce energy consumption up to 68%
- 50,000 hour rated life
- Mercury free
- Ability to power down for sunrise and sunset to save energy with dual ballast
Halogen

**CAPSYLITE® Halogen PAR Lamps**

CAPSYLITE PAR lamps offer substantial energy savings, great color, long life and state-of-the-art optics.

**Features:**
- Infrared conserving halogen capsule coating saves energy (up to 30%)
- Extended lamp life of 3,000-4,000 hours
- Patented SPL® optics for excellent beam control
- Hard glass capsule combined with IR coating and borosilicate reflector and lens system virtually eliminates UV-B and UV-C radiation
- Available in PAR20, PAR30, PAR30 LN and PAR38

**TRU-AIM® MR16 IR Low Voltage Reflector Lamps**

TRU-AIM MR16 IR lamps encompass all the technological advances of standard MR16s with significant reduction in energy consumption.

**Features:**
- Infrared conserving halogen capsule coating saves energy (up to 30%)
- Titanium overlaid dichroic reflector coating transmits heat out the back of the lamp for consistent color over the life of the lamp
- Extended lamp life of 5,000 hours
- UV filter capsule combined with IR coating virtually eliminates UV-B and UV-C radiation
- Cover lens for use in unshielded fixtures
- 4 beam patterns available in 3 wattages

**Bi-Pin IR Low Voltage Halogen Lamps**

These high luminous efficacy Bi-Pin IR lamps are the only low-voltage, infrared coated, bi-pin lamps in the industry.

**Features:**
- Infrared conserving halogen capsule coating saves energy (up to 30%)
- 4,000 hour lamp life
- UV filter capsule combined with IR coating virtually eliminates UV-B and UV-C radiation
- Replaces standard bi-pin base; no shielding required
- Axial filament design provides a superior, smooth beam pattern
Compact Fluorescent

DULUX® EL Micro Mini ECOLOGIC®
Compact Fluorescent Twist Lamps

SYLVANIA Micro Mini lamps are exceptionally small T2 lamps that deliver instant-on and flicker-free starting. They come on at full brightness and have an average rated life of 12,000 hours. These lamps are ENERGY STAR® qualified. These are our lowest mercury containing compact fluorescent lamps to date.

Features:
- Small overall length
- Instant-on at full brightness
- Flicker-free starting
- 12,000 hours average rated life
- Low mercury dose of 1.5mg
- ENERGY STAR qualified
- Ideal for small fixture applications
- 13, 20 and 23 watt energy saving alternatives for 60, 75 and 100W incandescent lamps

Dimmable 5 Watt Décor and 5 Watt A15
Compact Fluorescent Lamps

These cold cathode CFL lamps share a rated life of 25,000 hours. In addition to long life, these lamps provide instant-on starting and are compatible with timers, photocells and dimmers, like incandescent lamps. They are also an effective and efficient replacement for lighting that is turned on and off frequently with short periods of use (e.g. a bathroom, closet or lamps that are operated on motion sensors).

Features:
- Average rated life of 25,000 hours
- Instant-on
- Compatible with timers, photocells, motion detectors and dimmers
- Unlimited switching cycles
- Dim down to 1% of max light
- Reduce energy consumption up to 80%
Living Spaces™
Electronic Compact Fluorescent Lamps

Living Spaces lamps provide the most natural looking light produced by any CFL in the market. These lamps closely replicate the light produced by incandescent lamps. Their high R9 value allows for an improved rendering of warm tones and strong red colors, complementing healthy complexions. SYLVANIA offers a full product portfolio of Living Spaces lamps, from twist and 3-way lamps to reflectors.

If you want to save energy without sacrificing light quality, then turn on Living Spaces.

DULUX® T/E/IN ECOLOGIC®
High Temperature T4 Compact Fluorescent Lamps

DULUX Triple amalgam compact fluorescent lamps are ideal for use in a wide range of applications, including high temperatures.

DULUX T/E/IN 4-pin lamps give you the amalgam advantage. Amalgam regulates the pressure of the mercury vapor, resulting in improved high temperature performance. These lamps achieve 90% lumen output from 40°F to 140°F ambient.

Features:

- SYLVANIA exclusive CFL phosphor formulation provides enhanced rendition of the strong red color (CIE - R9) generating richer, warmer, redder color tones
- Energy saving alternative to incandescent lamps saves up to 75% energy compared to similar lumen output incandescent
- Long life: Up to 12,000 hour average rated life
- Flicker-free starting

- Improved high temperature performance from 40° to 140°F ambient
- Operates on various electronic ballasts – Flicker-free start
- 12,000 hour life
  - Reduces relamping interval and related costs
- Rare earth tri-phosphor with 82 CRI
- 2700K, 3000K, 3500K and 4100K
QUICKTRONIC® PROStart® CF
Electronic T4 Compact Fluorescent Programmed Rapid Start Ballasts

QUICKTRONIC PROStart CF electronic ballasts operate DULUX® D/E and T/E lamps with full lumen output and optimal system performance.

Low profile, lightweight enclosure designs allow easy installation.

Features:
• Programmed Rapid Start ballasts ideal for occupancy sensors
• QUICKSENSE® end-of-lamp-life circuitry
• Universal input voltage (120-277V)
• High power factor; low harmonic distortion
• Ideally suited for recessed downlights, wall sconces and ceiling fixtures
• QUICK 60+™ warranty

DULUX L SUPERSAVER® ECOLOGIC®
28 Watt T5 Compact Fluorescent Lamps

DULUX L SUPERSAVER ECOLOGIC 28 Watt lamps are direct replacements for DULUX L 40 Watt lamps and offer 10% energy savings and similar light output when operated on instant start and rapid start ballasts. Pair them with QUICKTRONIC High Efficiency ballasts to maximize energy efficiency.

Features:
• Direct high efficiency replacement for 40W DULUX L:
  – 10% energy savings
  – Similar fixture light output
• High efficacy (100 LPW)
• Improved lumen maintenance
• 3000K, 3500K, 4100K color temperatures
• Excellent color rendition, 82 CRI
• Operates on QUICKTRONIC systems with QUICKSENSE end-of-lamp-life circuitry

QUICKTRONIC High Efficiency DL40
T5 Instant Start Electronic Ballast

QUICKTRONIC QHE energy saving electronic ballasts save 6% to 9% over standard electronic ballasts without compromising light output or lamp life. The added energy savings also provides for a quicker payback.

Features:
• Energy savings of 6% to 9% over standard electronic ballasts
• QUICKSENSE end-of-lamp-life circuitry
• 0°F minimum starting temperature
• Virtually eliminates lamp flicker
• High power factor; low harmonic distortion
• Auto Reset when lamps are replaced
• Universal voltage (120V-277V)
• QUICK 60+ warranty
OSRAM SYLVANIA introduced the high efficiency T8 lamp to the lighting market in 1981 with the OCTRON® lamp family. Since then, we have continually developed and improved these products, emphasizing high efficiency, long life and environmental sustainability. OCTRON XP®, OCTRON XP SUPERSAVER® and OCTRON XPS® lamps – members of our ECOLOGIC®3 family – maximize the energy efficiency and environmental benefits for end users. Couple the OCTRON lamps with QUICKTRONIC® Programmed Start, High Efficiency Instant Start, or dimming ballasts for superior solutions to your lighting requirements.

ECOLOGIC3 represents a more comprehensive approach to sustainability encompassing high efficiency, long life and RoHS and TCLP compliance.

**OCTRON XP ECOLOGIC3**

EXtended Performance T8 Lamps

OCTRON XP ECOLOGIC3 lamps are energy saving, long life alternatives to standard T8 or T12 lamps. XP lamps are available in 2, 3, 4, 5 and 8-foot lengths. The 2 through 5-foot lamps are rated at 42,000 hours life at 12 hours per start on programmed rapid start ballasts and achieve as high as 94 lamp lumens per watt. When operated on QUICKTRONIC QHE ballasts, system efficiencies rise to 96 LPW.

**Features:**
- 2-5 foot lamps are ECOLOGIC3
- Long life
- 95% lumen maintenance
- 2700K, 3000K, 3500K, 4100K, 5000K, 6500K color temperatures
- Excellent color rendering, 85 CRI
**OCTRON® XPS® ECOLOGIC®3**

EXtended Performance Super T8 Lamps

OCTRON XPS ECOLOGIC3 lamps have all the advantages of the XP family and are even brighter. These lamps set the original “Super T8” standard, achieving as high as 97 lamp lumens per watt and are available in 2, 3 and 4-foot lengths.

**Features:**
- All XPS linear lamps are ECOLOGIC3
- Long life
- 95% lumen maintenance
- Excellent color rendering, 85 CRI (5000K and 6500K are 81)
- 4 foot lamps from 3000-6500K meet CEE requirements

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- 4 foot lamps from 3000-6500K meet CEE requirements

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**OCTRON XP SUPERSAVER® ECOLOGIC3**

T8 Lamps

OCTRON XP SUPERSAVER ECOLOGIC3 4 and 8-foot lamps are a superior alternative to standard T8 products in most indoor lighting applications.

Three 4-foot SUPERSAVER lamps are available: 30W, 28W and 25W; select the lamp wattage based on desired energy savings and light levels. Energy savings range from 6-22% on existing instant start or programmed rapid start ballasts.

Pair with QUICKTRONIC® High Efficiency (QHE) ballasts for additional savings.

**Features:**
- All XP/SS linear lamps are ECOLOGIC3
- Long life
- 95% lumen maintenance
- Energy efficient - saves 6-22% compared to full wattage T8s
- Excellent color rendering, 85 CRI
- 4 foot lamps from 3000-5000K meet CEE requirements

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**OCTRON XP XL ECOLOGIC3**

EXtended Performance EXtended Life T8 Lamps

In areas where a long life 4-foot T8 product is desired, OCTRON XP XL ECOLOGIC3 lamps are available in full wattage (32W) and two SUPERSAVER versions (28W and 25W). These lamps are rated at 150% longer life at 3 hours per start on instant start ballasts, compared to XP, XPS, or XP SUPERSAVER lamps.

**Features:**
- All XP/XL and XP/XL/SS lamps are ECOLOGIC3
- Extended life compared to other OCTRON lamps
- 97% lumen maintenance
- Excellent color rendering, 85 CRI
- 4 foot SUPERSAVER lamps meet CEE requirements
Be sure to look for the “NEMA Premium” mark on our QUICKTRONIC® High Efficiency (QHE) Ballasts/Systems. These systems allow you to meet the ever increasing demands of energy efficiency codes.

**QUICKTRONIC® QHE**

High Efficiency T8 Instant Start Electronic Ballasts

For optimal system performance, OCTRON® lamps can be operated on QUICKTRONIC QHE T8 instant start electronic ballasts which use less power, saving an additional 2-5 watts per ballast compared to standard T8 electronic ballasts. This family of ballasts provides the same light output and the same lamp life as standard T8 electronic ballasts.

**Features:**
- 2-5 watts savings per ballast
- Same light output; same lamp life
- Available in low, normal and high ballast factor models
- Universal voltage (120-277V)
- Low temperature starting: -20°F (-29°C) for T8 lamps
- Universal voltage (120-277V)
- NEMA Premium® Ballast Program and CEE compliant
- QUICK 60+ warranty

**QUICKTRONIC PROStart®**

High Efficiency T8 Programmed Rapid Start Electronic Ballasts

If longer lamp life is a prime consideration or if occupancy sensors are being used, then QUICKTRONIC PROStart ballasts are the ideal option. PROStart ballasts provide an optimized starting method which extends lamp life and allows over 100,000 switching cycles.

**Features:**
- PROStart technology provides longer lamp life, ideal for occupancy sensor usage - up to 100,000 switching cycles
- Available in low, normal and high ballast factor models
- Minimum starting temperature: 0°F (-18°C)
- 60°F (16°C) for energy saving T8 lamps
- Universal voltage (120-277V)
- NEMA Premium Ballast Program and CEE compliant
- QUICK 60+ warranty

**QUICKTRONIC POWERSENSE®**

T8 Electronic Dimming Ballasts

For the ultimate in energy savings, QUICKTRONIC POWERSENSE ballasts can dim T8 lamps from 100% - 5% light level, reducing input power to save energy. At light levels above 75%, unnecessary lamp coil power is turned off, delivering energy efficiencies comparable to non-dimming, instant start ballasts. The ballast can also be controlled by two wire, line voltage or 0-10VDC low voltage controllers to simplify installation and maintenance costs.

**Features:**
- Dimming range: 100 - 5%
- PROStart technology provides longer lamp life; ideal for occupancy sensor usage
- Compatible with line voltage and low voltage dimming controls
- Available in 1, 2, 3 & 4-lamp models
- Universal voltage (120-277V)
- NEMA Premium Ballast Program and CEE compliant
- QUICK 60+ warranty
**QUICKTRONIC® PROStart® QUICKSTEP®**
High Efficiency T8 Bi-level Dimming Ballasts

QUICKSTEP bi-level step dimming ballasts are specifically designed to meet California’s Title 24 energy efficiency standard for multi-level lighting controls (Section 131). The lamp and ballast combination offers a high efficiency system and high performance features for T8 luminaires.

This family of ballasts is designed to replace conventional ballasts in A/B switching applications. They can be controlled by conventional wall-box switches and/or occupancy sensors.

**Features:**
- QUICKSTEP bi-level step dimming from 100% to 50% power (0.87 BF to 0.34 BF)
- PROStart Programmed Rapid Start
- Suitable for use with occupancy sensors
- Meets energy code switching requirements:
  - California Title 24
  - ASHRAE 90.1
  - E.P.A. 2005
  - CBTD*
- Universal voltage (120-277V)
- NEMA Premium® Ballast Program compliant
- QUICK 60+® warranty

*Commercial Building Tax Deduction

**QUICKTRONIC PowerSHED™**
High Efficiency Demand Response Ballast

PowerSHED high efficiency demand response ballasts combine universal voltage, high efficiency three-lamp operation with a low cost method of emergency demand response power reduction. This load-shed ballast uses a building’s existing wiring thus avoiding pulling additional wires and the cost and complexity associated with traditional lighting control methods.

When the PowerSHED ballast is combined with OCTRON® SUPERSAVER® 28W T8 lamps, each 3-lamp fixture immediately saves up to 14 watts.

**Features:**
- Combines universal voltage (120-277V), three-lamp operation with emergency demand response power reduction
- The first system that uses a shared multi-circuit power line command injector
- Combines at least two utility incentives including: Permanent Load Reduction and Demand Response
- Instantly sheds up to 33% of the load upon receiving Power Line Control (PLC) signal
PENTRON®, PENTRON HO & PENTRON PREMIER™ ECOLOGIC®

T5 Lamps

PENTRON ECOLOGIC T5 lamps are available in two families, normal and high output. They are smaller in diameter and approximately 2 inches shorter in overall length than standard T8 lengths. This allows for greater luminaire design flexibility and improved luminaire efficiency. PENTRON type lamps are the same worldwide, leaving no compatibility questions. The PENTRON PREMIER 28 watt lamp reaches 109 lumens per watt, the highest efficacy currently offered in the lighting market. A single PENTRON HO 54 watt lamp can take the place of two T8 lamps.

Features:
- Energy efficient – as high as 109 LPW
- Long life
- Lead-free construction
- 3000K, 3500K, 4100K, 5000K & 6500K color temperatures
- Excellent color rendition, 85 CRI

QUICKTRONIC® PROStart®

High Efficiency T5 and T5HO Programmed Rapid Start Electronic Ballasts

QUICKTRONIC PROStart T5 and T5HO ballasts utilize programmed rapid start technology to deliver maximum lamp life – up to 100,000 starts. They are ideal for use with occupancy sensors and building control systems. These systems are suitable for a wide variety of applications thanks to the (1) amalgam technology available in PENTRON C lamps, (2) minimum starting temperature as low as -20°F for the ballasts and (3) 70°C maximum case temperature ballasts. Both the T5 and T5HO ballasts are CC (Commercial Cabinet) rated and feature QUICKSENSE® end-of-lamp-life circuitry.

Features:
- PROStart technology provides longer lamp life, ideal for occupancy sensor usage – Up to 100,000 switching cycles
- -20°F minimum starting temperatures for T5HO
- 70°C maximum case temperature for T5HO
- QUICKSENSE end-of-lamp-life circuitry
- Universal voltage (120V-277V)
- UL Type CC rated
- QUICK 60+® warranty
**QUICKTRONIC® POWERSENSE®**
High Efficiency T5 Dimming Electronic Ballasts

QUICKTRONIC POWERSENSE dimmable ballasts operate the PENTRON® T5 lamp families from 100% - 1% light level, reducing input power and saving energy. At light levels above 75%, unnecessary lamp coil power is turned off, delivering energy efficiencies comparable to non-dimming instant start ballasts. This family of ballasts can also be controlled by two wire, line voltage or 0-10VDC low voltage controllers which simplify installation and maintenance costs.

**Features:**
- Dimming range: 100 - 1%
- PROStart technology provides longer lamp life; ideal for occupancy sensor usage
- Compatible with line voltage and low voltage dimming controls
- Universal voltage (120-277V)
- QUICK 60+® warranty

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**QUICKTRONIC PROStart® QUICKSTEP®**
T5HO Bi-level Dimming Ballasts

The QUICKSTEP bi-level ballast is a high-efficiency, 54 watt T5HO ballast engineered to provide a lower ballast factor of 0.80 that delivers a 20 percent energy savings. The ballast has two light levels.

This family of ballasts is designed to replace conventional ballasts in A/B switching applications. They can be controlled by conventional wall-box switches and/or occupancy sensors.

**Features:**
- QUICKSTEP stepped switching bi-level output
- POWERSENSE® end-of-life-lamp circuitry
- PROStart Programmed Rapid Start technology
  - Suitable for use with occupancy sensors
- Meets energy code switching requirements:
  - California Title 24
  - ASHRAE 90.1
  - EPAct 2005
  - CBTD*
- Universal voltage (120-277V)
- QUICK 60+ warranty

*Commercial Building Tax Deduction*

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**QUICKTRONIC PROStart High Ambient Temperature and Switchable Ballasts**
T5HO Electronic Ballasts

QUICKTRONIC PROStart High Ambient Temperature ballasts are specifically designed for applications where the ballast is subjected to higher ambient temperatures such as high bay luminaires in industrial installations.

The 4-lamp switchable version is designed to operate fewer lamps when less electric light is needed, delivering additional energy savings.

**Features:**
- 90°C maximum ballast case temperature
- Lamp switching capability
- 100% ballast factor
- PROStart Programmed Rapid Start
  - Suitable for use with occupancy sensors
- QUICKSENSE end-of-life sensing circuitry
- Universal voltage (120-277V)
- QUICK 60+ warranty
High Intensity Discharge Systems

METALARC® PULSE START
Metal Halide Lamps

METALARC PULSE START lamps have an advanced arc tube design that provides enhanced lumen maintenance and more efficient operation compared to standard metal halide probe start lamps.

Energy savings can be achieved by substituting a lower wattage system. For example, replace a standard 1000W lamp with a 750W pulse start lamp for energy savings of up to 25%.* Due to a higher mean lumen output, the number of fixtures required to reach maintained light levels can be reduced. Users can achieve 20% energy savings by replacing an M400/U with an MS320/PS or an MS200/PS lamp.* Energy savings can be increased when used with our QUICKTRONIC® electronic ballasts.

* New PULSE START luminaire required

METALARC POWERBALL®
Ceramic Metal Halide Lamps

METALARC POWERBALL ceramic lamps feature patented, innovative arc tube technology that provides high CRI, improved red and white color rendering and superior lamp-to-lamp color consistency.

These lamps are ideal for color critical applications. End-users will achieve substantial energy savings compared to tungsten halogen lamps.

METALARC POWERBALL ceramic lamps operate on existing ANSI specified magnetic ballasts and compatible electronic ballasts.

Features:
- High CRI
- Long life compared to halogen
- High efficacy
- Superior color consistency
- Available in PAR, T, E17 and high wattage configurations
- METALARC PRO-TECH® versions suitable for open or enclosed fixtures
**QUICKTRONIC® eHID**
Electronic Metal Halide Ballasts

QUICKTRONIC eHID ballasts feature state-of-the-art electronic design that delivers performance levels beyond the reach of standard magnetic lighting systems.

METALARC® lamps and QUICKTRONIC MH Professional Series electronic metal halide ballasts are perfectly matched for optimal performance and efficiency.

**Features:**
- Consistent color temperature and CRI over lamp life
- Energy savings up to 15% compared to magnetic systems
- Improved lumen maintenance
- Constant power regulation
- Low harmonic distortion <10% THD
- Ease of installation; one piece design
- Universal voltage 120V-277V
- End-of-lamp-life circuitry
- High power factor
- QUICK 60+® warranty

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**METALARC® SUPERSAVER® and METALARC PRO-TECH® SUPERSAVER**
Metal Halide Lamps

Constructed with an enhanced arc tube for peak performance, METALARC SUPERSAVER and METALARC PRO-TECH SUPERSAVER lamps are designed as direct energy saving replacements for probe start metal halide lamps and require no ballast change.

**Features:**
- Direct retrofit for 175W metal halide lamp
  - Saves 25 watts of power and $25.00* of energy costs compared to a 175W metal halide lamp
- Direct replacement for 400W metal halide lamp
  - Saves 40 watts of power and $80.00* of energy costs compared to a 400W metal halide lamp
- Direct replacement for 1000W metal halide lamp
  - Saves 50 watts of power and $90.00* of energy costs compared to a 1000W metal halide lamp

*I Based on utility rate of $0.10/kWh over the life of the lamp in base-up position

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**LUMALUX PLUS® and LUMALUX PLUS ECOLOGIC®**
High Pressure Sodium Lamps

The SYLVANIA LUMALUX PLUS and LUMALUX PLUS ECO lamps incorporate the latest technology to eliminate the end-of-life cycling of HPS lamps. They remain off at end-of-life, reducing repeat trips and maintenance savings. These lamps have an average rated life of 30,000+ hours versus the standard HPS lamps at 24,000 hours.

**Features:**
- High efficacy: up to 125 lamp lumens per watt
- Universal operating position
- Long life
- Positive end-of-life indicator helps avoid unnecessary maintenance trips
QUICKTRONIC® PowerSHED™ Relay

The SYLVANIA QUICKTRONIC PowerSHED Relay allows users of the existing PowerSHED Ballasts and Injectors to add new types of loads to their demand response portfolio.

Features:
- Repeatable, predictable load reduction with immediate response
- PowerSHED requires no control wires, saves on installation time and money
- PowerSHED Relay can step dim QUICKSTEP® ballasts
- PowerSHED relay can switch non-lighting loads

ELOGIC™ Lighting Controls Sensor & Control for Daylight Harvesting

ELOGIC Lighting Controls for Daylight Harvesting provide closed loop daylight harvesting control using the 0-10V port on a dimming ballast.

Features:
- Add daylight harvesting to T5 or T8 fixtures
- Perfect for retrofit applications
  - No new wires
- Simple, cost effective solution
- Add occupant control with wall box dimmer
  - No new wires
Inductively Coupled Electrodeless Fluorescent Systems

ICETRON® QUICKTRONIC®
Inductively Coupled Electrodeless Fluorescent Systems

The ICETRON lamp and QUICKTRONIC ballast system reduces maintenance costs due to the long 100,000 hour average rated life. This is five to eight times the typical service life of conventional fluorescent and metal halide lamps.

The inductively coupled electrodeless lamp generates light using magnetic-induction technology instead of an electrode at each end of the fluorescent tube to generate light. The absence of electrodes allows for much longer lamp life.

Features:
- 100,000 hour system life
- Instant on/Instant restrike
- Starting temperatures as low as -40°F
- Amalgam technology for wide operating temperature range
- 3500K, 4100K and 5000K color temperatures
- Universal voltage
- Quiet operation
- High power factor
- UL Type 1 and Type 2 (outdoor) ballast enclosures
While undergoing an extensive renovation, the Tremont Plaza Hotel, located in downtown Baltimore, MD, also wanted to significantly reduce the hotel’s energy consumption and utility costs through the elimination and replacement of 2,200 60- and 100W incandescent lamps with more energy-efficient lighting technology.

Energy savings was the primary goal of the lighting replacement, but it was equally important to Tremont Plaza Hotel that the suites’ aesthetic appeal and guests’ comfort not be sacrificed. With a commitment to servicing the community and a genuine interest in guest satisfaction, the hotel management turned to North American lighting leader OSRAM SYLVANIA for its expertise.

Lighting accounts for nearly 25 percent of the electricity consumed by hotels and for more than 40 percent in guest rooms alone. By replacing over 2,200 incandescent lamps with energy efficient Living Spaces™ Compact Fluorescent Lamps from OSRAM SYLVANIA, the Hotel reduced its annual energy consumption by 135,780 kWh, resulting in $17,651 of savings annually. The hotel has also benefited from the lamps’ long life by reduced frequency in lighting maintenance.

The Tremont Plaza Hotel was delighted with the results of the lighting upgrade. They achieved the energy savings they desired with state-of-the-art lighting technology, while maintaining the hotel’s standard of excellence. With a full product line, hotels can improve every socket from the entryway to the bedside lamp.

Staples, the world’s largest office product company, saw an opportunity to save money and conserve energy in their retail store interiors and their headquarters parking area in Framingham, MA. Staples turned to SYLVANIA Lighting Services (SLS), a division of OSRAM SYLVANIA, to determine the best way to increase their lighting efficiency.

SLS recommended an LED solution to refit Staples’ 158 parking lot fixtures on the Staples headquarters campus, providing brighter white light. The LED lighting systems proved to be a much brighter and whiter light source at about one-tenth the energy usage. For their retail stores, SLS recommended upgrading from first generation T8 fluorescent lamps to a high efficiency T8 fluorescent lamp and ballast system for nearly 700 retail locations across the country. SLS also installed SYLVANIA PowerSHED™ ballasts in over 100 California Staples stores. These high-tech ballasts interface with smart grid technology and lower store light levels during periods of peak electricity demand, limiting the risk of rolling blackouts. SLS also retrofitted approximately 1,000 30-watt linear fluorescent lamps per retail location with 28-watt OCTRON® 800XP® SUPERSAVER® fluorescent lamps and QUICKTRONIC® high efficiency, instant start, T8 ballasts.

The bottom line? The retrofit projects save Staples a combined 10,193,770 kilowatt-hours each year, lessening the company’s carbon footprint by 15,647,437 pounds of CO₂ emissions annually— an amount equivalent to the emissions of 1,367 cars. The project resulted in more than a million dollars in annual energy savings.
Founded in 1957, Kikkoman Foods, Inc., is a major international provider of foods and beverages and the world’s leading producer of soy sauce. As a business leader in corporate citizenship and responsibility, Kikkoman is deeply committed to its local communities and to environmental protection.

In support of this commitment, Kikkoman called in SYLVANIA Lighting Services to upgrade outdated lighting systems at their oldest soy sauce production facility in Walworth, Wisconsin. Project goals included reducing energy consumption, lowering maintenance costs and providing a safer and enhanced plant environment.

SYLVANIA Lighting Services determined that the existing 400-Watt metal halide lamps and T12 linear fluorescent lamps in the plant could be simply retrofitted with more energy-efficient SYLVANIA PENTRON® T5 ECO® linear fluorescent lamps and OCTRON® F032 ECOLOGIC® T8 linear fluorescent lamps. This seemingly minor change would achieve the desired reduction in electrical energy usage, maintenance costs and improved overall lighting quality.

Beginning in late 2007, the SLS team retrofitted 3,000 lighting systems inside and outside the Walworth, Wisconsin plant. Existing 400 Watt metal halide systems were replaced with new fluorescent systems employing 54 Watt SYLVANIA PENTRON T5HO ECOLOGIC Linear Fluorescent Lamps. Existing F40T12 and F96T12/HO lamps were replaced with 32 Watt SYLVANIA OCTRON XPS® ECOLOGIC T8 Linear Fluorescent Lamps.

The retrofit reduced the plant’s lighting load by 45 percent from 2,744,196 kWh to a mere 1,517,334 kWh per year. The change from 400W metal halide to the energy-efficient fluorescent technology is anticipated to yield a yearly savings of over $97,000. SLS recycling of the existing lighting products, ongoing lighting maintenance and reduction of spare parts inventory as a result of using longer-lasting lamps, will save an additional $10,000 each year. The project is expected to pay for itself in less than three years. Kikkoman has received utility rebates in excess of $73,000 for undertaking these initiatives.

Located in the heart of San Francisco, California Pacific Medical Center (CPMC) needed to upgrade lighting systems throughout their main campus. CPMC wanted to reduce energy consumption, operating and maintenance costs, while heightening the hospital’s overall aesthetic appeal.

After a rigorous approval process, CPMC chose SYLVANIA Lighting Services (SLS) over other lighting service companies because of the company’s ability to bundle services and solutions of sister companies, such as OSRAM SYLVANIA and Siemens, and its relationships with OSRAM SYLVANIA Commercial Engineers and OEMs. Other winning factors were the company’s exceptional product warranties and dedication to the advancement of lighting technology. In light of the present economy, the CPMC wanted to also ensure their choice of lighting manufacturer would be in business for the life of the products’ warranties.

Thanks to the winning combination of quality, energy efficient SYLVANIA products, along with a substantial utility rebate, CPMC was able to achieve a payback of less than 2 years (1.75 years). With the first phase of the project complete, CPMC saves $247,200 annually on energy costs and with the completion of the second phase the medical center will be saving a total of $918,172 in annual energy costs. With retrofitted lighting systems, the CPMC saves on energy consumption while providing a more welcoming environment for patients and visitors.
# SYLVANIA Product Application by Market Segment

## Commercial
*Office, Property Management*
- OCTRON XP
- OCTRON XP XL
- OCTRON XPS
- OCTRON SUPERSAVER
- PENTRON
- PENTRON PREMIER
- PENTRON HO
- DULUX Pin-Based
- DULUX L 28W SUPERSAVER
- DULUX EL
- METALARC Pulse Start
- METALARC SUPERSAVER
- METALARC POWERBALL Ceramic
- CAPSYLITE
- TRU-AIM IR
- Bi-Pin IR
- LED Systems
- DLM Modules
- DL Light Engines
- HF Narrow Stick
- HF Power Stick
- LINEARlight FLEX/PFLEX
- OPTOTRONIC Power Supplies
- QUICKTRONIC High Efficiency
- QUICKTRONIC PSX
- QUICKTRONIC QUICKSTEP Bi-LEVEL T8 & T5
- QUICKTRONIC POWERSENSE T5 & T8 Dimming
- QUICKTRONIC CF
- QUICKTRONIC PROStart T5 & T5HO
- QUICKTRONIC eHID
- QUICKTRONIC POWERSHED
- ULTRA PAR

## Retail
*General Merchandise, Display Accent, Showcase, Refrigeration*
- LED Systems
- LEDstixx Lighting Systems
- LED T8 Lamps
- RT4
- RT6
- SYLVANIA Emergency Light
- DLM Modules
- DL Light Engines
- Distributed Array
- HF Narrow Stick
- HF Power Stick
- LINEARlight Power Flex
- LINEARlight FLEX TOPLED
- OPTOTRONIC Power Supplies
- CAPSYLITE
- TRU-AIM IR
- DULUX Pin-Based
- DULUX L 28W SUPERSAVER
- OCTRON XP
- OCTRON XP XL
- OCTRON XPS
- OCTRON SUPERSAVER
- PENTRON
- PENTRON PREMIER
- PENTRON HO
- METALARC POWERBALL Ceramic
- QUICKTRONIC High Efficiency
- QUICKTRONIC PSX
- QUICKTRONIC POWERSENSE T5 & T8 Dimming
- QUICKTRONIC PROStart T5 & T5HO
- QUICKTRONIC eHID
- ULTRA HD
- ULTRA PAR
- LED General Purpose

## Museum/Display
- CAPSYLITE
- TRU-AIM IR
- Bi-Pin IR
- LED Systems
- LEDstixx Lighting Systems
- SYLVANIA Emergency Light
- DLM Modules
- DL Light Engines
- Distributed Array
- HF Narrow Stick
- OPTOTRONIC Power Supplies
- OCTRON XP
- OCTRON XPS
- PENTRON
- PENTRON PREMIER
- PENTRON HO
- METALARC Pulse Start
- METALARC SUPERSAVER
- METALARC POWERBALL Ceramic
- CAPSYLITE
- TRU-AIM IR
- LED Systems
- LED T8 Lamps
- RT4
- RT6
- SYLVANIA Emergency Light
- DLM Modules
- DL Light Engines
- Distributed Array
- HF Narrow Stick
- HF Power Stick
- LINEARlight Power Flex
- LINEARlight FLEX TOPLED
- OPTOTRONIC Power Supplies
- QUICKTRONIC High Efficiency
- QUICKTRONIC PSX
- QUICKTRONIC QUICKSTEP Bi-LEVEL T8 & T5
- QUICKTRONIC POWERSENSE T5 & T8 Dimming
- QUICKTRONIC PROStart T5 & T5HO
- QUICKTRONIC eHID
- ULTRA HD
- ULTRA PAR

## Education
- OCTRON XP
- OCTRON XP XL
- OCTRON XPS
- OCTRON SUPERSAVER
- PENTRON
- PENTRON PREMIER
- PENTRON HO
- DULUX Pin-Based
- DULUX L 28W SUPERSAVER
- DULUX EL
- METALARC Pulse Start
- METALARC SUPERSAVER
- METALARC POWERBALL Ceramic
- CAPSYLITE
- TRU-AIM IR
- Bi-Pin IR
- LED Systems
- LED T8 Lamps
- RT4
- RT6
- SYLVANIA Emergency Light
- DLM Modules
- DL Light Engines
- Distributed Array
- HF Narrow Stick
- HF Power Stick
- LINEARlight Power Flex
- LINEARlight FLEX TOPLED
- OPTOTRONIC Power Supplies
- QUICKTRONIC High Efficiency
- QUICKTRONIC PSX
- QUICKTRONIC QUICKSTEP Bi-LEVEL T8 & T5
- QUICKTRONIC POWERSENSE T5 & T8 Dimming
- QUICKTRONIC PROStart T5 & T5HO
- QUICKTRONIC eHID

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*Note: The table above lists products and applications for different market segments.*
**Healthcare**
- Assisted Living, Hospital, Rehabilitation

- OCTRON XP
- OCTRON XP XL
- OCTRON XPS
- OCTRON SUPERSAVER
- PENTRON
- PENTRON PREMIER
- PENTRON HO
- DULUX Pin-Based
- DULUX L 28W SUPERSAVER
- DULUX EL (incl. Living Spaces)
- METALARC Pulse Start
- CAPSYLITE
- TRU-AIM IR
- Bi-Pin IR
- QUICKTRONIC High Efficiency
- LED Systems
- LEDstixx Lighting Systems
- LED T8 Lamps
- RT4
- RT6
- SYLVANIA Emergency Light
- DLM Modules
- DL Light Engines
- Distributed Array
- HF Narrow Stick
- HF Power Stick
- LINEARlight Power Flex
- LINEARlight FLEX TOPOLED
- COLORMIX SYSTEMS
- OPTOTRONIC Power Supplies
- QUICKTRONIC PSX
- QUICKTRONIC POWERSENSE
- T5 & T8 Dimming
- QUICKTRONIC PROStart T5 & TSHO
- QUICKTRONIC CF
- QUICKTRONIC eHID
- ULTRA PAR
- LED General Purpose

**Hospitality**
- Hotel, Motel, Restaurant

- OCTRON XP
- OCTRON XP XL
- OCTRON XPS
- OCTRON SUPERSAVER
- PENTRON
- PENTRON PREMIER
- PENTRON HO
- PENTRON C
- METALARC SUPERSAVER
- METALARC Pulse Start
- METALARC POWERBALL Ceramic
- CAPSYLITE
- TRU-AIM IR
- Bi-Pin IR
- LED Systems
- LEDstixx Lighting Systems
- LED T8 Lamps
- RT4
- RT6
- SYLVANIA Emergency Light
- DLM Modules
- DL Light Engines
- Distributed Array
- HF Narrow Stick
- HF Power Stick
- LINEARlight Power Flex
- LINEARlight FLEX TOPOLED
- OPTOTRONIC Power Supplies
- QUICKTRONIC PSX
- QUICKTRONIC POWERSENSE T5 & T8 Dimming
- QUICKTRONIC PROStart T5 & TSHO
- QUICKTRONIC CF
- QUICKTRONIC eHID
- ULTRA HD
- ULTRA PAR
- LED General Purpose

**Industrial**
- Manufacturing, Warehouse / Distribution Center

- OCTRON XP
- OCTRON XP XL
- OCTRON XPS
- OCTRON SUPERSAVER
- PENTRON
- PENTRON HO
- PENTRON C
- METALARC Pulse Start
- METALARC SUPERSAVER
- METALARC POWERBALL Ceramic (320W)
- QUICKTRONIC High Efficiency
- QUICKTRONIC PROStart
- T5 & TSHO
- QUICKTRONIC QUICKSTEP Bi-LEVEL T8 & T5
- QUICKTRONIC eHID
- LED Systems
- LINEARlight Power Flex
- LINEARlight FLEX TOPOLED
- OPTOTRONIC Power Supplies
- ICETRON
- ICETRON LED SYSTEMS
- LED T8 Lamp
- ProPoint Gas Canopy
- ProPoint Parking Garage
- ProPoint Shoe Box
- OPTOTRONIC Power Supplies

**Outdoor/Municipal**
- Canopy, Building Facade, Monuments, Parking Area & Garage, Street/Roadway, Security

- OCTRON XP
- OCTRON XP XL
- OCTRON XPS
- PENTRON HO
- PENTRON C
- METALARC Pulse Start
- METALARC SUPERSAVER
- LUMALUX PLUS
- QUICKTRONIC High Efficiency
- QUICKTRONIC PROStart
- T5 & TSHO
- QUICKTRONIC QUICKSTEP T5HO - High Temp
- QUICKTRONIC eHID
- ICETRON
- LED SYSTEMS
- LED T8 Lamp
- ProPoint Gas Canopy
- ProPoint Parking Garage
- ProPoint Shoe Box
- OPTOTRONIC Power Supplies

**Signage & Brand Identity**
- Channel Letters, DOT Signage, Externally Illuminated Signage, Internally Illuminated Signage

- LED Systems
- HF Chain X3
- HF Narrow Stick
- LINEARlight Power Flex
- LINEARlight FLEX TOPOLED
- OPTOTRONIC Power Supplies
- ICETRON
- OCTRON XP
- OCTRON XP XL
- PENTRON
- PENTRON H0
- PENTRON C
- METALARC Pulse Start
- METALARC SUPERSAVER
- ICETRON
- OCTRON XP
- OCTRON XP XL
- PENTRON
- PENTRON H0
- PENTRON C
- METALARC Pulse Start
- METALARC SUPERSAVER
- LUMALUX PLUS
- QUICKTRONIC High Efficiency
- QUICKTRONIC PROStart
- T5 & TSHO
- QUICKTRONIC QUICKSTEP T5HO - High Temp
- QUICKTRONIC eHID
- ICETRON
- LED SYSTEMS
- LED T8 Lamp
- ProPoint Gas Canopy
- ProPoint Parking Garage
- ProPoint Shoe Box
- OPTOTRONIC Power Supplies
When you partner with OSRAM SYLVANIA, you aren’t just buying a lighting system. We understand that when you conduct an energy analysis, undertake a lighting upgrade or retrofit, work towards LEED certification or integrate your facility’s lighting with today’s modern building management and control systems, you need a partner who can provide design consultation, service and support from start to finish.

In addition to our Industrial Commercial sales professionals and National Account managers, the OSRAM SYLVANIA sales team includes our nationwide network of Commercial Engineers. These specification and new technology experts work closely with architects, lighting designers, contractors, fixture manufacturers and you, the end user, to provide the most sophisticated lighting technical support and consultation services in the industry.

OSRAM SYLVANIA is the only lamp and ballast manufacturer in the industry with its own full-service installation and maintenance business. For energy management solutions, look no further than SYLVANIA Lighting Services (SLS). SLS offers a full range of turnkey analysis, installation and maintenance solutions for interior and exterior lighting systems. Not only do we help specify your system, we install it, service it, warranty it, and arrange for the recycling of old lighting equipment. You might think that’s amazing. For us, it’s standard.

The system is the solution.

We pioneered The System Solution®, providing customers with precisely matched lamp and ballast/power supply combinations designed to deliver longer life, improved efficiencies and energy savings. Purchasing light sources and electronics from the same manufacturer means the technologies are designed in tandem with one another for maximum performance.

We back up these systems with our QUICK 60+® System Warranty, the industry’s most complete and comprehensive system coverage. It’s the simple way to make sure you’re completely covered. With our lamps and ballasts, your lighting installation will enjoy the highest levels of performance.
When we can do more with less, everyone wins. Meeting our needs today without compromising the resources future generations will need, touches everything we do as a company. At OSRAM SYLVANIA, we strive to find ways to grow without adding to our environmental footprint—and the good news is we are making steady progress. Global Care represents our commitment to corporate responsibility. This initiative is designed to drive positive results to the triple bottom line addressing social, economic and environmental issues. Furthermore, we are dedicated to meeting our customers’ lighting needs with a sustained approach to product design, development, manufacturing and distribution. We’re using less energy and fewer natural resources both in our manufacturing process and packaging and generating less waste. Many of our most energy efficient lighting products are smaller and lighter weight resulting in more efficient transportation.

In this brochure we have shown how, at a national or a corporate level, energy efficient lighting can play an important part in your own business sustainability strategy. Whether you’re interested in lowering your energy bills, avoiding frequent, costly maintenance, identifying options for lamp and ballast recycling, or finding products containing little or no hazardous materials, OSRAM SYLVANIA can help.

For more information about the OSRAM SYLVANIA commitment to environmental sustainability, or about any of our energy-saving and environmentally preferable lighting solutions, visit www.sylvania.com/sustainability