

On the Road to a Greener Planet.

OSRAM SYLVANIA Automotive Lighting



Global Care represents our commitment to environmental and social responsibility.

**OSRAM
SYLVANIA**



An aerial photograph of a vast landscape featuring rolling green hills and a large body of water in the foreground. The hills are covered in lush green grass and scattered trees. The sky is filled with soft, white clouds, suggesting a bright but slightly overcast day. The overall scene conveys a sense of natural beauty and environmental care.

A driving force for our environment and your world.

At OSRAM SYLVANIA, we're driven to make a dramatic impact on automotive lighting. We're also determined to minimize our impact on the global environment. We're committed to sustainability—a philosophy that governs our code of conduct, our innovations and our business decisions. It's also the goal behind each of our environmental guidelines, which are emphasized and put into practice at our facilities and offices around the world. Our commitment to social and environmental responsibility touches every aspect of our company, from our production lines and recycling programs to OSRAM's membership in the UN Global Compact, the world's largest global corporate citizenship initiative. Each day, we look for new innovations to light the way to a healthier environment. And we've given this long-standing commitment a name: Global Care.



Our Guidelines

1. Environmental protection in all areas of work
2. Environmentally friendly production methods
3. Environmental protection as a social responsibility
4. Save energy
5. Environmental protection beyond the legal requirements
6. Professional environmental management
7. Safety for people and the environment
8. Transparency and communication both internally and externally
9. Environmental protection worldwide

Accelerating change.

Global Automotive Lighting is leading the lighting industry by committing to positive change. Guided by our principles of saving resources and avoiding waste, we've developed automotive lighting systems that optimize energy savings without compromising performance. We've cut back on hazardous materials and reduced packaging waste. We've pursued environmental protection beyond the legal requirements, and we've adapted a company-wide environmental management program to ensure that our policies are effectively implemented. It isn't just the right thing to do; it's the only thing to do. We owe it to our environment, future generations, our customers and each other.



Environmentally Responsible Products

Long-Life

Long-lasting lighting systems resulting in less waste.

ECOLOGIC®

Our program is designed to reduce the environmental impact of our processes, packaging and products.

Energy-Saving

Lighting that uses less power and energy.

High Intensity Discharge (HID) Lighting Systems



These long-life lighting systems last up to the life of the vehicle.

Last up to 3x longer than conventional halogen technology.

Produce less waste because there's less need to replace.

Our newest products —D3 systems and D4 lamps are mercury free.

HID systems use less power.

42 watts of system power means a 30–50% reduction in electrical power.

Using less electricity results in fuel efficiencies.

Halogen Bulbs



Available in several long-life versions (9003, 9005, 9008).

These bulbs contain no cadmium, mercury or lead.

Our H15, H4 daytime running lights use only 15 watt nominal power.

Auxiliary Bulbs



Long-life versions require fewer changes over the life of the vehicle.

These bulbs contain no hazardous materials. All bulbs are lead free. There is no cadmium in the glass and no lead in the solder.

JOULE™ Light Emitting Diode (LED) Signal Systems



These long-life LED lighting systems last the life of the vehicle.

Less waste because there's no need to replace.

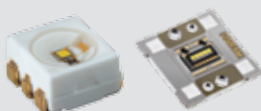
These systems contain no mercury, lead or cadmium.

Signal uses only a 4 watt light source.

Uses 85% less energy than the comparable incandescent automotive signal light source.

Fog lamp uses much less energy than an incandescent lamp.

LEDs Advance Power TOPLED® OSTAR® Headlamps



Extremely long-life light sources; designed to last the life of the vehicle.

Less waste because there's no need to replace.

These headlamps contain no mercury or lead.

Consume less energy than standard automotive light sources.

Packaging.

Because we are an international company shipping products all over the world, we realize the dual importance of efficiency and sustainability in our packaging materials and policies. We stay current on the latest environmental packaging developments, and we continually strive to use renewable, non-hazardous and recycled packaging materials in our efforts to reduce our environmental footprint.

Our paperboard packaging contains up to 100% post-consumer recycled fiber (depending on type), and our aftermarket forward lighting packaging uses 40% less plastic per year than the previous packaging used. Even our printing inks are made with a high concentration of renewable sources like vegetable oil and pine-derived resins.

In NAFTA, we've increased the packaging efficiency of all our products through cube reduction efforts, which will save the equivalent of 13 full trailer trucks every year. The material used in outer packaging has been reduced to the extent

that we will be saving more than 2,000 kilograms/4,500 pounds of corrugated paperboard per year. This reduces the amount of raw materials needed and increases the number of products that can be shipped at a time, improving transportation efficiency and reducing fuel usage and associated air pollution.

Within our Packaging Engineering Department, we have an Automotive Packaging Engineer who has recently achieved Environmental Electronics Packaging Certification through the Institute of Packaging Professionals.





Post-consumer material is an end product that has completed its life cycle as a consumer item and would otherwise have been disposed of as solid waste. Post-consumer materials include items such as office paper, cardboard, aluminum cans, plastics and metals.

Vegetable oil-based inks use natural compounds from oilseeds, which replace petroleum product derivatives. The inks are biodegradable, rapid drying and rub-off resistant.

We use non-hazardous, recyclable materials for our product packaging, and we make every product package as small and light as possible, cutting down on the use of fossil fuels and CO₂ emissions. We've also developed a space-saving, high-capacity, reusable shipping container program made from recyclable plastic, which further reduces fossil fuel consumption and CO₂ emissions. These reusable containers keep almost 10,000 kilograms/22,000 pounds of corrugated material out of landfills each year, with even greater potential as more customers adopt the program.

By recycling and minimizing packaging materials, our Treviso, Italy, plant has reduced production waste by 32%. For the majority of our products, cardboard boxes are used for the primary packaging and corrugated boxes for shipment packaging. The cardboard and paper used to produce these packaging components have a high recycled

quota—80% for cardboard boxes and blister cards and between 70% and 90% for corrugated board materials.

Only a small proportion of products (about 4%) in the retail segment is marketed in blister packs containing plastic. The plastic material used is PET (polyethylene terephthalate), which in contrast to PVC (polyvinyl chloride) has only a small environmental impact in terms of its manufacture and disposal.

Our packaging volume for retail items has been reduced by 42%. In addition, about 30% of lamps are supplied to customers in reusable trays. And as often as possible, the pallets are collected from customers and reused for future shipments. Intermediate packaging for internal transport during manufacture is mostly multi use packaging made from corrugated cardboard or plastic.



Energy usage.

All over the world, we're taking steps to become more responsible stewards of our planet. We're conserving energy; running safer, cleaner plants; cutting down on fossil fuel usage and making products that will help consumers conserve even more energy.

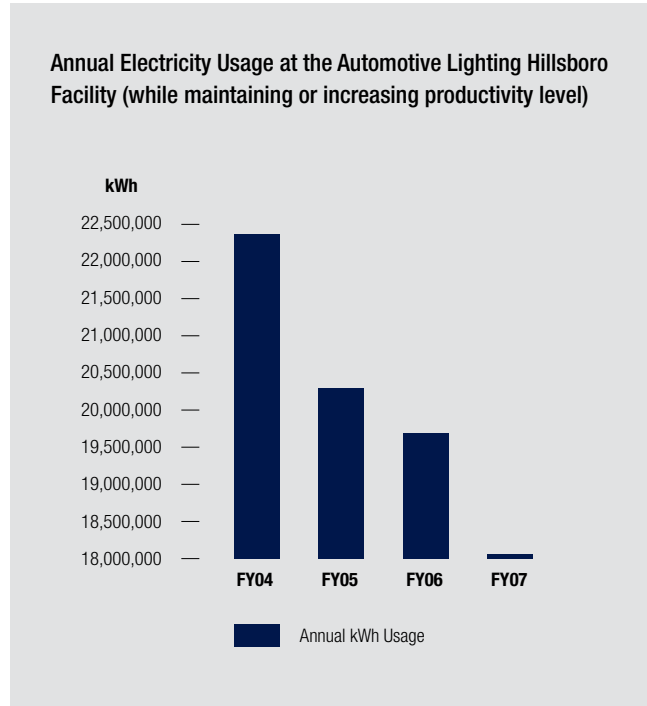




Hillsboro, New Hampshire, USA: Certifications and Milestones

- U.S. Environmental Protection Agency National Environmental Performance Track certification, May 2005
- ISO 14001 Environmental Management System certificate, October 1999

We continuously strive to reduce energy consumption. In our Hillsboro, New Hampshire facility alone, we've reduced energy usage by almost 10%. We use ENERGY STAR®-certified products and high-efficiency motors and air-conditioning units; we've installed occupancy sensors to automatically shut off lights in empty rooms. We've implemented a computer-controlled energy management system to regulate building temperatures, and we're using more energy-efficient air compressors in manufacturing and maintenance. This plant also promotes a company-wide culture to conserve resources, and we train our personnel to help save energy wherever possible.



By producing its own liquid nitrogen, the Herbrechtingen plant in Germany cut truck deliveries by 17,000 kilometers/10,563 miles per year, more than the distance from Alaska to Cape Horn along the Pan-American Highway.



By installing a high-performance cooling system using low ambient temperatures to supplement or offset cooling by compressors in our HID lamp production area, the Berlin plant saved over 3400 megawatt hours of electricity annually—enough to provide electricity year-round to 950 private homes. Similarly, by harnessing the heat absorbed by cooling water during LED production, our Regensburg, Germany, plant saves 5300 megawatt hours of electricity—enough to power 1,500 private homes every year. And at all main production facilities in Europe, we recover exhaust air at the lamp production lines, which saved the equivalent of 2500 megawatt hours in 2006.

Managing hazardous materials.

We are committed to reducing hazardous materials in all that we do, from the development and production of our products to the cleaning processes we use in our global plants and facilities. With improved technologies and efficient storage techniques, we not only achieve Restriction of Hazardous Substances (RoHS) compliance, we reduce hazardous substances to the absolute minimum.





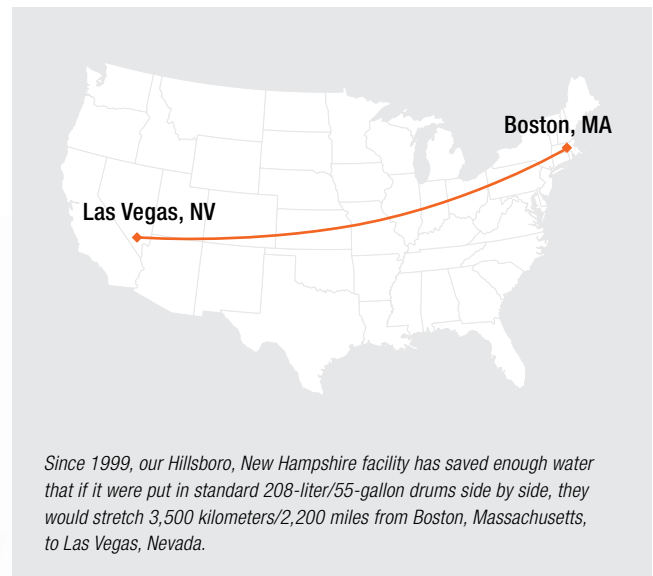
RoHS is a law restricting the use of certain hazardous substances in electrical and electronic equipment.

Shipments of hazardous liquids have been reduced by up to 90%, and we've installed a secured, bermed chemical room with a double containment system for safely storing chemicals. We've also installed a receiving dock next to our chemical storage room to minimize the amount of chemical and hazardous materials that travel through our facility in Hillsboro, New Hampshire, USA.

Our Hillsboro plant also successfully reduced lead emissions to 0 in 2006 by converting miniature lamp products from leaded to non-leaded glass. Likewise, in China, we're using lead-free materials in our new generation of products. And since January 1, 2006, our soldering production lines have been lead free.

Conserving Water

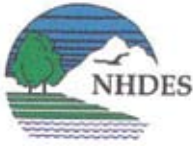
We developed a charter to decrease the amount of water used in our Hillsboro plant. After just 10 months we've reduced our water consumption from 503,000 liters/133,000 gallons to 30,000 liters/8,000 gallons by incorporating a closed-loop cooling system on all applicable equipment. This allowed us to re-use water versus running city water continuously for operation.



Preventing pollution.

Eliminating waste and contaminants from the environment is in the front of our minds at all times. Whether it's our disposal programs, our sustainability standards on the production lines or our safety policies surrounding hazardous substances, we're always committed to clean energy and to cleaning up after ourselves.





Certifications and Milestones

- New Hampshire Governor's Pollution Prevention Award, October 2004

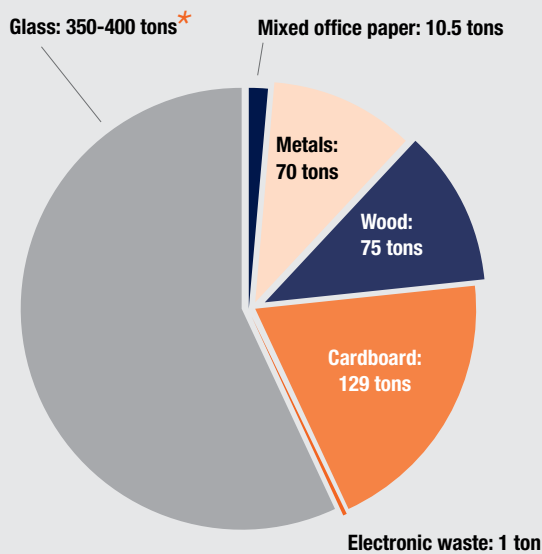
In our Hillsboro, New Hampshire, USA, facility we've reduced greenhouse gas (CO₂) emissions by more than 4 million kilograms/4,410 tons over the last 3 years, and we regularly monitor the air quality in our plant. Also, our manufacturing area contains no sinks or basins that allow dumping, ensuring that all liquids are properly disposed of, and our high-risk catch basins have controls in place to minimize and/or prevent unwanted discharges to storm drains. In addition, we've installed safety cabinets plant-wide to contain flammables, and we partnered with the U.S. Environmental Protection Agency National Environmental Performance Track to reduce volatile organic compounds (VOCs).

We collect glass and metal (aluminum, ferrous) shrinkage in our production lines, and up to 90% of this is reusable. We also reduce chemicals and solvents to the bare minimum to avoid excess waste.

Our Treviso, Italy, plant reduced production waste by 32% between 2002 and 2007. Treviso also reduced acid waste by 25%. In our Herbrechtingen plant in Germany, we replaced the trucked-in liquid nitrogen needed for production with nitrogen we generate on-site. The result is a tremendous reduction of fossil fuel usage, energy consumption, CO₂ (carbon dioxide) and NO₂ (nitrogen dioxide) emissions.

Recycling in Hillsboro, New Hampshire, USA

Between 2000 and 2007, we recycled literally tons of materials each year.



* This includes leftover glass or glass broken during the manufacturing process.

- Volatile organic compounds are emitted as gases from certain solids or liquids and may have short- and long-term adverse health effects.
- Greenhouse gases are components of the atmosphere that contribute to the greenhouse effect. Some greenhouse gases occur naturally in the atmosphere, while others result from human activities.

Driving results in the community worldwide.

As a global company we do business in many societies and cultures, and we're actively involved in a variety of social, developmental and environmental projects worldwide.





Our Mission

“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.

In our Hillsboro, New Hampshire, USA, facility, we always try to play a vital role in the community. From participating in the “Adopt a Highway” program and environmental committees to providing matching grants for United Way, we serve in any capacity needed to make a positive difference. Our employees regularly volunteer their time to the American Red Cross, Boy Scouts, American Cancer Society, medical and fire rescue, Make a Wish Foundation and many other worthwhile organizations.

At our factory in York, Pennsylvania, USA, 90% of employees support the company’s charity projects with volunteer work or donations. They build houses for Habitat for Humanity, donate clothing and food for needy children and give books to the local reading and writing education center.

OSRAM China provides support to poor families so that children can go to school, and OSRAM employees provide the children with financial help for day-to-day living.

OSRAM China also adopted three pandas and started the OSRAM Panda Foundation, which donates a percentage of OSRAM’s proceeds to the protection of this endangered species.

In the Galapagos Islands, scientists at the Darwin Research Station incubate giant tortoise eggs under OSRAM lamps, giving the almost-extinct species a new lifeline.

Notes on Global Care statement:

“We all must contribute to protect our environment as a living space for future generations. With energy-saving light we can reduce the CO₂ emissions that are responsible for global warming.”

— Martin Goetzeler, CEO of OSRAM

At our OSRAM gallery in Munich, Germany, we sponsor art projects to promote young artists who take new approaches. Once or twice a year, OSRAM invites artists to develop works of art on a local theme.

Similarly, we reach out to young women through our Student Illumination Movement in Germany. We invite girls ages 14–19 to our Regensburg facility and teach them about the development and production of LEDs, giving them hands-on experience and insight into technical professions.

OSRAM also works with non-governmental organizations (NGOs) on projects in developing countries. These projects include lighting for regions without a permanent power supply and technology for mobile water purification. The African Medical and Research Foundation (AMREF) is currently testing OSRAM water purification lamps for use in Kenya.

OSRAM Automotive Lighting

OSRAM is one of the leading suppliers of automotive lamps and is also one of the market leaders in the field of electronic control gear (ECG) for lamps. The OSRAM brand name was registered in 1906 and is one of the oldest trade names still recognized throughout the world. On July 1, 1919, AEG, Siemens & Halske AG and Deutsche Gasglühlicht AG (Auer Gesellschaft) merged their light bulb production activities. Today, Siemens AG is the sole shareholder in OSRAM GmbH.

OSRAM SYLVANIA, together with OSRAM GmbH, is a leader in automotive lighting for original equipment manufacturers (OEMs) and the aftermarket. The Global Automotive Lighting division's primary North American operation is in Hillsboro, New Hampshire, USA, with nearly 700 employees. In addition to meeting TS 16949 and ISO 9001 quality standards, this facility has also achieved ISO 14001 environmental certification. Global Automotive Lighting designs, develops, manufactures and markets state-of-the-art automotive light sources, including advanced halogen, auxiliary, light emitting diode (LED) and high intensity discharge (HID) lighting for interior, exterior and forward lighting applications. Over 400 lamp types are produced for cars, trucks and electronics in facilities throughout the USA, Europe, Latin America and Asia.

Automotive applications for OEMs are marketed under the OSRAM brand worldwide, whereas products for the NAFTA aftermarket are sold under the SYLVANIA brand.

OSRAM

Headquartered in Munich, OSRAM employs more than 41,000 people throughout the world. OSRAM is one of the two largest lighting manufacturers in the world and has 48 factories in 17 countries. A high-tech company in the lighting industry, OSRAM generates around 60% of sales from energy-efficient products.

OSRAM SYLVANIA

Headquartered in Danvers, Massachusetts, USA, OSRAM SYLVANIA is the North American operation of OSRAM GmbH, a wholly owned subsidiary of Siemens AG. OSRAM SYLVANIA is a leader in lighting solutions and specialty products that feature innovative design and energy-saving technology. The company sells products for homes, businesses and vehicles under the SYLVANIA and OSRAM brand names.