



Delivering performance

Electronic HID: A Brighter, Smarter Solution Over Halogen

PHILIPS
ADVANCE

Illuminating the benefits of eHID over halogen

Innovation is vital to the growth of any business. To stay competitive in the lighting market, solutions must meet the evolving needs of customers today and provide measurable value down the road. That takes a vision of performance that drives quality, peace of mind, and a positive impact on the bottom line.





The evolution of eHID

Metal halide HID lighting has become an increasingly popular choice for a wide array of lighting applications since its introduction in the 1960s. The first metal halide lighting systems featured standard quartz, probe-start metal halide lamps driven by magnetic ballasts. They delivered good-quality light and a high lumen output for the energy they consumed. This energy efficiency, coupled with an acceptable quality of light, enabled these early lighting systems to dominate a variety of commercial and industrial high bay lighting applications.

Since that time, advances such as the development of pulse-start lamp and ballast technology have helped to transform HID lighting into the energy-efficient, bright, and cost-effective solution it is today. But the recent introduction of lighting systems with ceramic metal halide lamps driven by electronic ballasts (eHID) has enabled users to enjoy an even greater standard of performance in the form of:

- Sparkling white light
- Enhanced color control
- Sleek and compact design
- Higher energy efficacy
- Long life
- Greater cost efficiency
- Lower total cost of ownership
- Enhanced flexibility
- Environmental sustainability and legislative compliance

These breakthrough developments in lamp and ballast technology have allowed manufacturers and designers to bring the superior performance of eHID lighting systems to a full range of new applications where halogen lighting had been the preferred option. No longer relegated to high-wattage industrial settings, eHID is gaining popularity in commercial, retail, outdoor, residential, healthcare, and hospitality settings.

The performance benefits of eHID

From a performance perspective, ceramic metal halide eHID lighting systems offer significant advantages over halogen

Sparkling White Light

Ceramic metal halide lamps and eHID ballasts deliver the most consistent white light and highest color rendering (as high as the mid-90s) of any metal halide source. Ideal for a variety of interior and exterior applications where the quality of light is paramount, ceramic metal halide lighting systems provide high levels of crisp, white light that accurately renders color.

Enhanced Color Control

With their unique ability to keep a lamp operating at a true constant wattage, eHID ballasts enable ceramic metal halide lamps to deliver the most consistent color and light output possible. In addition to maximizing the superior color properties of each ceramic metal halide lamp over its entire life, ceramic metal halide eHID lighting systems provide greater color consistency from lamp to lamp, enabling customer environments to be consistently cast in the truest, most appealing light for the longest period of time.

Sleek and Compact Design

As technology continues to advance, ceramic metal halide lamps and eHID ballasts continue to provide increasing levels of performance with increasingly smaller dimensions. This miniaturization allows for sleeker, less obtrusive, and more effective lighting fixtures, providing greater flexibility and creativity for lighting engineers, designers, specifiers, and end users.



The operational benefits of eHID

Drive profitability with higher efficiency and less maintenance

High Efficacy

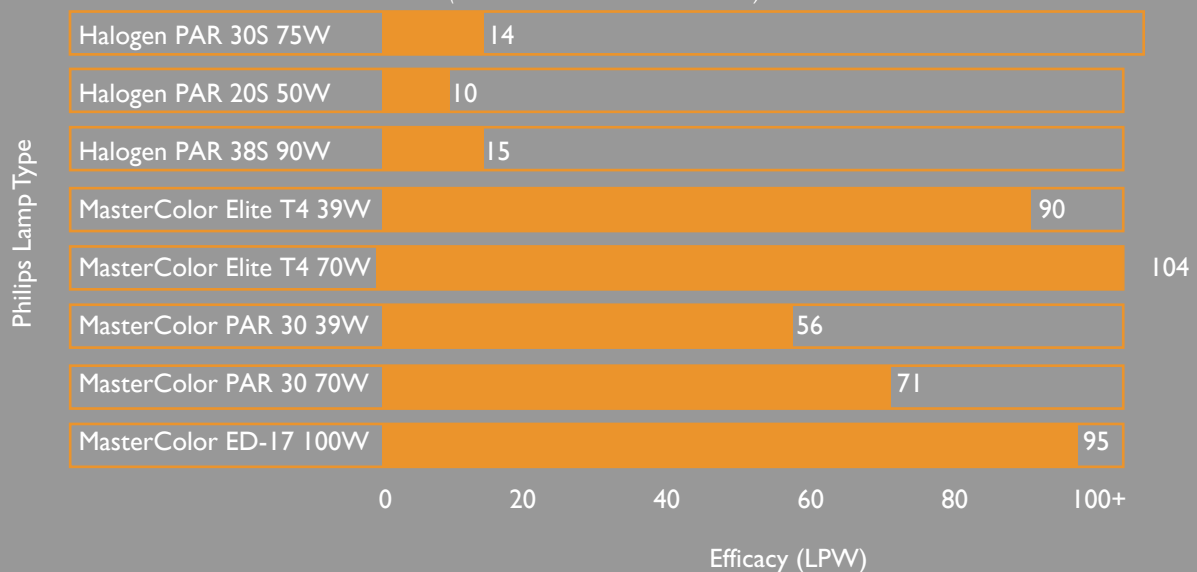
Lighting can account for as much as 20% of all electricity costs, and as such, it's an excellent opportunity for cost reduction. When measured in lumens per watt consumed, ceramic metal halide lamps and eHID ballasts far outshine halogen in lighting efficacy. As shown in the comparison chart below, efficacy (lumens divided by watts) is significantly improved with a lighting solution driven by eHID ballasts and ceramic metal halide lamps. This improvement enables a much faster payback for end users and helps them capitalize on their opportunities to reduce energy and boost profitability.

Cost Efficiency

With outstanding lumen maintenance and reduced energy consumption, ceramic metal halide eHID lighting systems can deliver the same amount of light with up to one-third fewer fixtures than halogen options. At the same time, with lower energy requirements, more fixtures can be placed on the same circuit, lowering overall installation costs and reducing material and labor costs.

Philips Lamp Efficacy Comparison: Halogen vs. Ceramic Metal Halide Lamps¹

(As Measured in Lumens Per Watt)





Long Life

With up to 20,000 hours of rated average life¹, lighting systems with ceramic metal halide lamps and eHID ballasts can last up to seven times longer than halogen alternatives. Longer, dependable service life means fewer lamp outages over the system's lifetime. This not only minimizes the product and maintenance costs associated with frequent lamp replacements, it also helps maintain a more productive environment in any setting, whether it's commercial, retail, outdoor, residential, industrial, healthcare, or hospitality.

Lower Total Cost of Ownership

While the installation of a ceramic metal halide eHID lighting system does involve a higher up-front cost relative to halogen options (because all HID systems require the addition of a ballast to start and regulate the lamp's operation), the

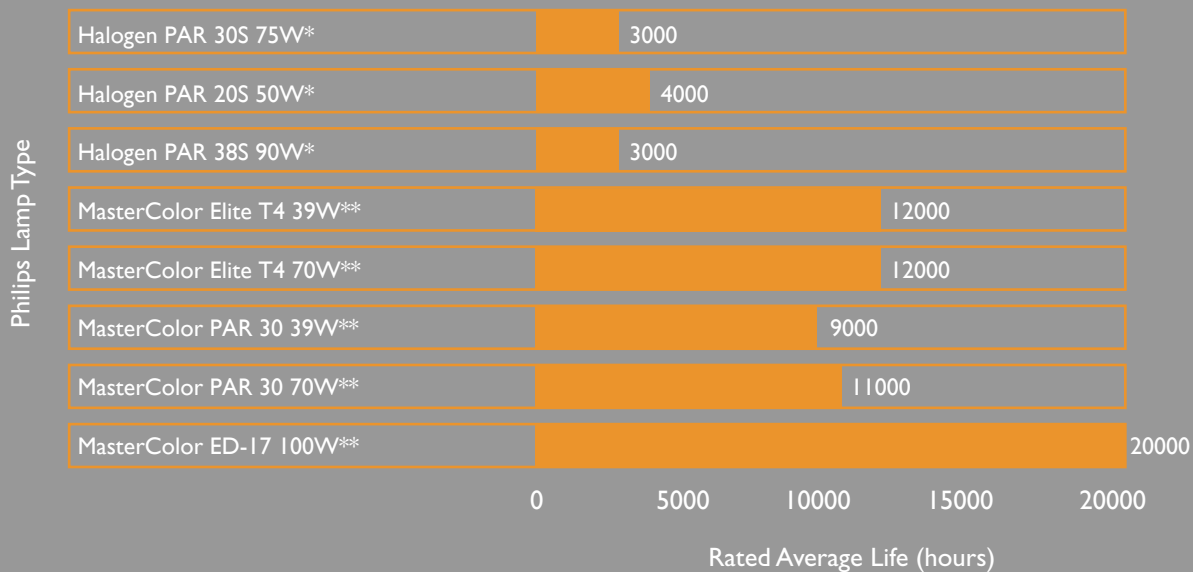
higher-quality light and greater cost efficiency over the life of the investment result in a lower total cost of ownership for end users.

Flexibility

Until recently, ceramic metal halide eHID lighting systems were only available for 35W-150W applications, with lamps offered in several color temperatures and in a variety of outer lamp envelopes. Ongoing development in ceramic metal halide lamp and eHID ballast technology has led to an expanded array of wattages, extending the benefits of the technology to a wider range of applications.

Compact, low-profile 20W-22W ceramic metal halide lamps have positioned eHID as an ideal replacement for halogen in any setting where high-quality, long-life lighting is needed.

Rated Average Life Comparison of Philips Halogen and Ceramic Metal Halide Lamps¹



¹ Source: Philips Lighting Lamp Specification and Application Guide 2006 (SAG-100)

* Rated average life is the length of operation in hours at which point an average of 50% of the lamps will still be operational and 50% will not.

** Rated average life is the life obtained, on the average, from large representative groups of lamps in laboratory tests under controlled conditions at 10 or more operating hours per start. It is based on survival of at least 50% of the lamps and allows for individual lamps or groups of lamps to vary considerably from the average.

Environmental sustainability and legislative compliance

Through its high energy efficiency and uncompromising lighting effectiveness, a lighting system with ceramic metal halide lamps and eHID ballasts is an excellent way for customers to promote environmental sustainability and help reduce the impact of global warming. The EPA estimates that for every kilowatt hour of energy we save, we can prevent 1.4 pounds of carbon dioxide, 2.5 grams of sulfur dioxide, and 0.95 grams of nitrogen oxides from entering the atmosphere.²

Government standards and regulations are affecting the choices customers make in lighting as well. Advance eHID ballasts deliver the 1.9W per square foot of lighting power density currently mandated by ASHRAE 90.1-2001 energy standards. They can also help customers comply with California's Title 24, Part 6 and the Energy Independence & Security Act of 2007, which provide specific requirements for energy efficiency with regard to lighting systems in residential and non-residential buildings.

Future evolution of eHID technology

eHID technology continues to evolve with new, integrated products entering the marketplace. The ongoing miniaturization of these systems enhances versatility and expands lighting fixture

design possibilities. Research and development in lamp and electronic ballast technology is yielding ceramic metal halide lighting systems with improved controllability, faster switching of light levels, and improved dimming capabilities. There's no question that eHID represents a solid platform for future development of both lamp and ballast designs.

A long history of performance, knowledge and service

Together, with more than 175 years of combined leadership in the lighting industry, Philips Lighting and Philips Lighting Electronics are leading the way with sustainable lighting solutions that can help drive your business forward. And we're committed to providing a wide array of eHID ballasts, lamps, and systems specifically designed to meet your growing performance requirements.

As your ideal partner, our One Philips team not only provides solutions for growing your business, but we also offer a single point of contact for all of our customers' eHID ballast and lamp needs, including sales, customer support, technical assistance, and warranty and credit services. We also offer access to our global research and development resources for full collaboration from product design through delivery and support.

² Source: EPA eGRID2006

For more information on the eHID family of products, call (866) 915-5886 and let Philips and Philips Lighting Electronics help drive your business forward.



©2009 Philips Lighting Electronics
All rights reserved.

Form No. EH-5110-R01 12/09

Philips Lighting Electronics
10275 West Higgins Road
Rosemont IL 60018
Tel: 800-322-2086 Fax: 888-423-1882
Customer Support/Technical Service: 800-372-3331
OEM Support: 866-915-5886
www.philips.com/advance