



# Bronzelite®

and EISA Compliance



Bronzelite is a Philips group brand

**PHILIPS**

# What is EISA?

The Energy Independence and Security Act of 2007 (EISA) is a federal law that was approved on December 19, 2007, geared to help reduce energy consumption and decrease our dependence on oil.

A section of this bill specifically mandates the regulation of metal halide ballast efficiencies in both manufactured and imported luminaires for sale in the United States on or after January 1, 2009.

EISA preempts all states that have previously passed regulations for metal halide luminaires with the exception of California. The California Energy Commission (CEC) is authorized to implement regulations until 2011.

EISA does not effect the manufacture or sale of metal halide luminaires outside of the United States nor does it require the retrofitting of existing installed luminaires.

# Ballast Efficiency Requirements

## The Energy Independence and Security Act of 2007 (EISA)

Effective January 1, 2009, all 150-500W metal halide lamp luminaires must contain a ballast meeting the following minimum levels of efficiency:

- 88% for magnetic pulse start ballasts
- 94% for magnetic probe start ballasts
- 90% for electronic  $\leq$  250W probe start ballasts
- 92% (for lamps > than 250 watts)

Exceptions include luminaires that:

- Utilize regulated lag ballasts or 480V electronic ballasts
- Are rated for 150W lamps and wet locations and contain a ballast rated for use in an ambient temperature greater than 50°C

### Exemptions:

- Luminaires using regulated ballasts.
- Luminaires using electronic ballasts rated for 480 volts.
- Luminaires rated only for 150W lamps, AND rated for wet locations as defined by NEC 2002 Section 410.4(A), AND contain a ballast rated to operate at an ambient air temperature above 50C (per UL 1029-2001).

# Label & Package Markings

Per EISA requirements, all luminaires that meet the prescribed efficiency standards shall have a capital letter “E” within a circle on ballast labels and luminaire packaging.

Only luminaires which meet the efficiency requirements may display this marking.



# Impact on Cost



Getting to 88% ballast efficiency requires higher grade steel and more of it, particularly at the lower wattages. This low-loss steel is significantly more expensive and has resulted in a “cost inversion” with the lower wattage ballasts now costing more than the higher wattage ballasts.

# Pulse Start Benefits

Higher efficiency, pulse start ballasts and lamps, are not a new technology and offer significant benefits over probe start:

- Up to 50% increase in efficacy (lumens per watt)
- Up to 16% improvement in lumen maintenance
- Up to 50% longer lamp life
- Superior color rendition (up to 85+ CRI)
- Reduction in color shift
- Colder starting temperatures (as low as -40F)
- 50% reduction in warm-up time (2 minutes to full brightness)
- 80% reduction in lamp re-strike times (3-4 minutes)

# Pulse Start vs. Probe Start

## Lamp Performance Comparisons

Pulse Start vs. Probe Start Technology				
Technology	Lamp Wattage	Mean Lumens	Lamp Life	System Wattage
EISA Compliant	175W	11,200	15,000	198W
Probe Start		8,775	10,000	210W
EISA Compliant	250W	16,625	15,000	291W
Probe Start		13,500	10,000	295W
EISA Compliant	400W	29,280	20,000	452W
Probe Start		24,000	20,000	458W

# Cost Savings

With improved lumen output, end users can substitute lower wattage pulse start systems for even greater energy savings without sacrificing light levels (e.g. a 175W probe start system can be replaced by a 150W pulse start system, or a 400W with a 320W).

The opportunity to reduce luminaire lamp watts can significantly lower end user's energy consumption.

Savings can also be realized with high-efficiency pulse start ballasts (vs. probe start) that last longer due to their cooler operating temperatures. With a lower total cost of ownership, these features combine in a powerful way and enable your end user's lighting system to pay for itself.



# Bronzelite<sup>®</sup> Compliance

Bronzelite supports the EISA legislation and will be fully compliant on or before January 1<sup>st</sup>, 2009.

We will begin using up our existing stock of non-compliant, probe start ballasts and switching over to higher efficiency, compliant, pulse start ballasts immediately.

In the conversion process, Bronzelite will be replacing 175W, 250W & 400W probe start ballast offerings with 150W, 250W & 320W pulse start ballasts respectively. These EISA compliant, pulse start ballasts offer comparable or better lumen output with the added benefit of energy savings.

You will begin to see compliant luminaires with the (E) marking on packing labels in the near future. If you have any questions, please contact your local Hadco sales representative.

Regards,



Eric Anderson - VP, Marketing