



data sheet:
**Metrolight Smart Electronic
Ballast for HID™**
250/320/350/400/450 Watt



High frequency Metrolight Smart Electronic Ballasts for HID™ 250 watt through 450 watt lighting systems provide dramatic energy savings, drastically reduced maintenance costs, and significantly extended lamp life. The Smart Electronic Ballasts for HID™ are perfect for demanding indoor and outdoor environments such as supermarkets, malls, industrial sites, parking lots, distribution centers, warehouses, and street lighting. The software embedded within the Smart Electronic Ballasts for HID™ system improves efficiency, reliability, size, and cost of the ballast. The Smart Ballasts perform effectively and consistently, providing excellent lumen stability, extending lamp life, and dramatically reducing the frequency of lamp replacement.

Superior Technology Greater Savings

With Metrolight, you get all the energy savings of fluorescent systems plus all the benefits of HID, including greater color temperature, a softer, more comfortable light, and greater performance regardless of ambient temperature. Metrolight 250 watt through 450 watt HID Electronic Ballasts can be integrated with an optional control and communication platform for central monitoring and control. This extends the system's energy saving capabilities, providing advanced end-of-life alerts and feedback from lamps resulting in reduced maintenance costs. In addition, the platform enables field reconfiguration capabilities that allow for the ballast to be easily configured as per requirements or per lamp parameters including power rating, dimming settings, and more. Metrolight's leading-edge dimming control feature provides an additional and significant energy saving advantage. Dimming can be controlled in accordance to human activity, daylight harvesting regimes, and interactive operation mode lighting systems.

Features	Benefits
Microprocessor-controlled for maximum flexibility, digital precision and reliability	Extends lamp life; greater efficiency and efficacy, low components count, higher reliability, compact size
Micro-Start™ digitally controlled ignition	Lumen consistency; color consistency; virtually eliminate lamp electrodes and "wall blackening"; longer lamp life
Control & Communication	Extends energy saving capabilities, monitoring, control, reducing maintenance costs, advance end of life alert
Full range dimming (optional)	Use only the exact amount of light needed. Significant energy saving
Automatic scheduling	Automatic control of dimming, on/off functions per lamp
Sodium lamp hot re-strike	Instant relighting after power cuts or turn-off
The most compact dimensions in the industry	Allowing for elegant applications; ability to integrate into smaller space

Operating Specifications

Dimensions (LxWxH)	8.46" x 3.43" x 2.16" / 215mm x 87mm x 55mm
Operating temperature range	-30°C to +65°C / -22°F to 149°F
Maximum case temperature (Tc)	85°C
EMC	FCC Title 47 Part 18 C (non-consumer) (If the Smart Electronic Ballast is installed within a lighting fixture, an external dedicated Metrolight Line Adapter may be required. Contact customer support for more information.)
Regulation	UL Listed  

Input Specifications

Input values for power and current are dependent on the lamp wattage. Other input values apply across all Smart Ballasts.

Lamp Power, Voltage and Current Specifications

450W MH lamp

Input Power	478W
Input Voltage	277VAC (+10% to -15%)
Power Factor (at nominal conditions and full power)	>0.97

400W MH or HPS lamp

Input Power	426W
Input Voltage	200 – 277VAC (+10% to -15%)
Power Factor (at nominal conditions and full power)	>0.96

350W MH lamp

Input Power	375W
Input Voltage	200 – 277VAC (+10% to -15%)
Power Factor (at nominal conditions and full power)	>0.96

320W MH lamp

Input Power	344W
Input Voltage	200 – 277VAC (+10% to -15%)
Power Factor (at nominal conditions and full power)	>0.96

250W MH lamp

Input Power	269W
Input Voltage	120 – 277VAC (+10% to -15%)
Power Factor (at nominal conditions and full power)	>0.96

General Input Specifications

Continuous full range dimming	50% – 100% of full power (Optional: 35% – 100% of full power, subject to Metrolight approval) (Optional: Reverse dimming 100%-50)
Dimming options	Analog dimming by dimmer, ambient sensor, light sensor or any other compatible sensor. Digital dimming – Connection to control software's. Automatic dimming profile
Lumen maintenance	>90% over lamp life (dependent on lamp type)

Protections

Self-protection mechanisms:

- In the event of a short circuit, or open circuit
- If the lamp fails to light
- At the end of the lamp's life
- Input current protection by internal fuse

Heat Management:

If the Tc rises beyond 91°C during use, the Smart Electronic Ballast will switch itself off.

If the ballast's Tc temperature reaches beyond 85°C during use, the Smart ballast will gradually reduce its output power to 50%, allowing the ballast to cool. When the Tc falls below 85°C again, the ballast will return to full output power. Power is decreased and increased at a rate of 10 minutes time constant.

About Metrolight

Metrolight is a leading supplier of Smart Electronic Ballasts for High Intensity Discharge (HID)[™] lighting systems. Metrolight's patented technology saves retailers, sporting venues, churches, warehouses, manufacturers and municipal governments up to 65% on their energy bills while delivering spectacular light lasting two times longer than competitors. Metrolight provides the broadest offering of Smart Electronic Ballasts, with multi-voltage products ranging from 20 watts up to 1000 watts and Remote Monitoring and Control Systems, designed with the 21st century in mind: digital, Internet-connected, energy-efficient and dimmable.

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