

# Steel Ballast Housing w/ Electronic Ballast

## SH GEB TECHNICAL SPECIFICATIONS

### Environmental

Ambient Temperature: -30°C to 40°C (-22°F to 104°F)  
55°C (131°F) HA Option Available (Consult Factory)

### Electrical

Input Voltage Range: 180v to 305v, 50 or 60 Hz (Includes +/-10% change in line voltage)

(100% Power)

Lamp	Input Volts	Input Amps	Input Watts	Lamp Watts	Input Watts @ 50% Power
320	208	1.7	345	320	185
	240	1.5			
	277	1.3			
350	208	1.9	375	350	200
	240	1.65			
	277	1.4			
400	208	2.1	425	400	255
	240	1.9			
	277	1.7			

Lamp Wattage Regulation: +/- 0.5% over entire input voltage range

Lamp Operating Frequency: 100kHz +

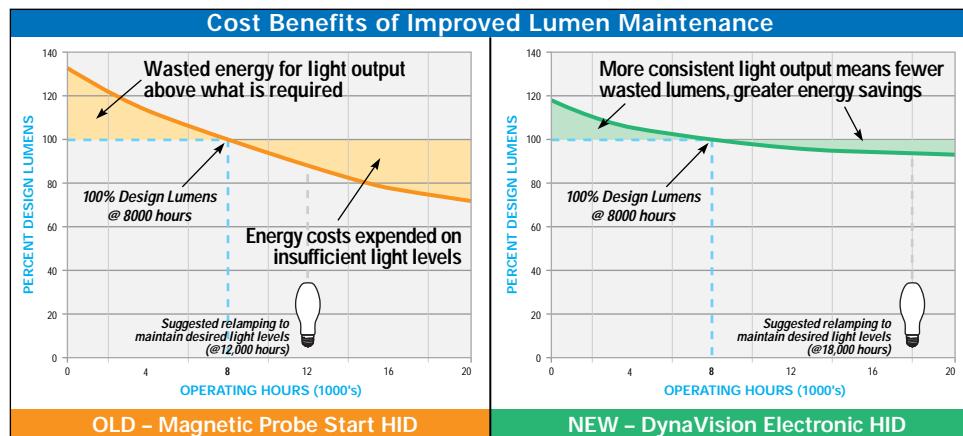
Harmonic Distortion: less than 15% THD at all intensities

Power Factor: greater than 0.90 at all intensities

### Photometric

Ballast Factor: 1.0 for all lamp types

Lamp Lumen Depreciation: 0.86 at 8,000 hrs (40% of average rated lamp life)



## OTHER PROPERTIES

### ORSTD (Quartz Restrike System Time Delay)

A 250-watt quartz lamp that supplies auxiliary light. Internal circuitry switches on the quartz lamp when the luminaire first energizes, or when a momentary power dip extinguishes the HID lamp. The quartz lamp extinguishes automatically when the HID lamp reaches 50% power. Dimming does not activate the quartz lamp.

### High Power Factor, Low Line Harmonics

Luminaires equipped with the GEB option operate at a high power factor (> 0.90) and low harmonics (< 15% THD) at all intensity levels.

### Lowest Input Power

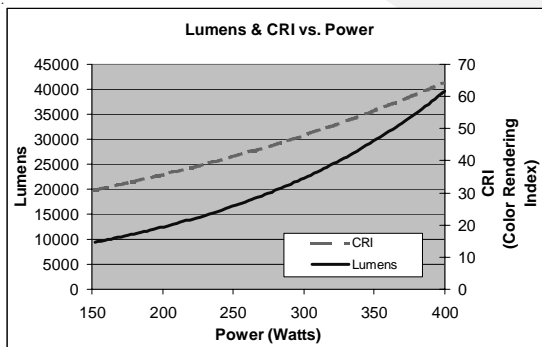
Electronic ballasts operate more efficiently than magnetic designs, resulting in reduced energy consumption and cooler operation. Also, unlike magnetic ballasts, dimming the electronic ballast reduces its losses even further, resulting in the lowest available input power levels of any variable intensity luminaire.

### Low Voltage Intensity Control

A simple 0 – 10 volt DC control signal varies the lamp power from 100% to 50% of full output (0 volts = 100%), making the electronic ballast compatible with a variety of commercially available controls.

Continuous variable control of lamp power and light output offer opportunities for energy savings. Several differences exist, though, between the performance of metal halide dimming and the more common incandescent dimming. These differences include dimming range, lamp color and lamp response time.

**Dimming Range:** Metal halide lamps have a limited control range that most people would find inadequate for architectural dimming applications. Low end of the light level dimming range is factory set to 28% (50% power). This limit prevents the lamps from cooling excessively and reducing their useful life.

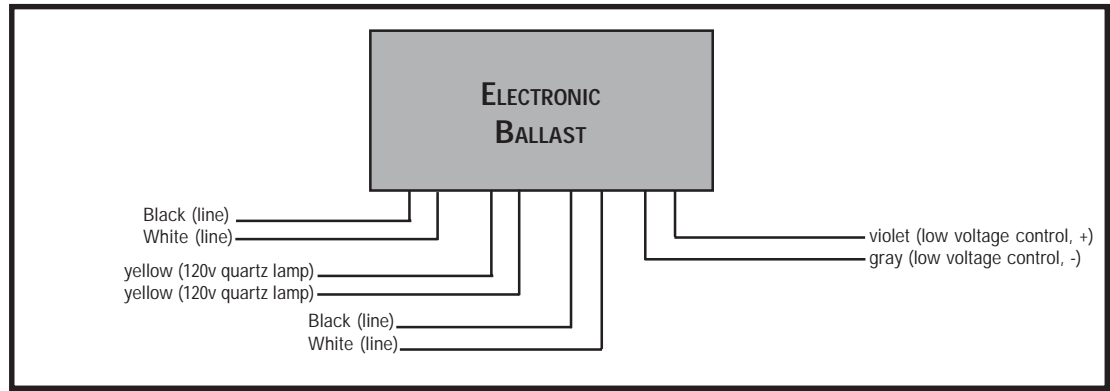


**Lamp Color:** Almost all lamps exhibit color shift when dimmed. Incandescent lamps shift toward the red end of the color spectrum. Metal halide lamps shift in the opposite direction, toward the blue. This shift is a result of additives falling from the arc stream as the operating temperature drops. Refer to Spectral Color charts (left).

**Lamp Response Time:** When the intensity of a metal halide lamp is adjusted, part of the response is immediate. The transition continues, slowly, as the lamp stabilizes at its new operating temperature. A quick adjustment from full output to minimum, for example, will yield an immediate change from 100% to about 50% light output. Output continues to decrease for about three minutes, stabilizing at the minimum level of 28%. This gradual transition is difficult to detect visually, as the human eye adapts at the same rate.

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## Wiring Diagram



## Warranty

GEB series HID electronic ballasts are warranted for three (3) years from date of original purchase, in accordance with the terms set forth in Lithonia Lighting's standard published limited warranty.

## Lamp Lumen Maintenance

Metal halide pulse start lamps operated on high frequency electronic ballasts exhibit enhanced lumen maintenance characteristics. A primary contributor to lamp lumen depreciation on a 60 Hz magnetic ballast is the cooling and reheating of lamp electrodes as the arc extinguishes and then restrikes 120 times each second. Each time the lamp reignites, a small amount of material erodes from the electrodes, depositing on the arc tube wall. Electronic ballasts operating at frequencies above 100 kHz produce much shorter "off time" intervals, significantly reducing electrode cooling cycles. The result is an 11-point improvement in rated mean lumens (0.86 vs. 0.75).

