

# Access Fixtures

## Pulse-Start Metal Halide Lighting v. Traditional Probe Start Metal Halide Lighting

Metal halide high-intensity discharge (HID) lamps are widely used in commercial lighting applications because they are about three times as efficient as incandescent lamps. For years there has been one main technology for middle wattage metal halide (MH) fixtures/lamps, probe start. While low wattage MH fixtures/lamps were pulse start, that technology was not available in mid wattage of 250w to 400w. Today there is a choice, a pulse-start MH fixture/lamp combination that saves energy, increases bulbs life, has quicker starts and lower operating cost too! While the initial fixture and lamp may cost slightly more, the payback is rapid and lasts for years.

Pulse-start and probe-start lamps use a different ballast system. Traditional probe-start metal halide lamps do not use an igniter and require three electrical contacts to ignite the gas and remain lit. Newer pulse-start metal halide lamps use only two contacts and use an igniter located inside the ballast pod. The benefits are substantial.

Pulse-start fixtures/lamps offer several benefits:

- Longer Life - Up to 50% longer life reducing maintenance & replacement cost
- Higher Efficacy – As much as 24% more lumens per watt saving energy and money
- Rapid Restrike Time – Less than half the time to re-light when shut down
- Better Color Rendition – Superior and more stable color rendering as lamps age
- Less Color Variance – Lamps throughout the area appear to be the same color
- Quick Startup – Full brightness in 2 to 4 minutes instead of 5 to 10 minutes
- Superior Lumen Maintenance – About 14% less lumen depreciation means more light

### **Energy Savings of a Pulse-Start 320W v. a Probe-Start 400-W MH Lighting System**

	400-W Probe-Start	320-W Pulse-Start
Number of fixtures	100	100
Lamp life	20 000 hours	20 000 hours
System mean lumens	24,000	23,140
Input watts per luminaire*	458	349
Total system watts	45,800	34,900
Annual hours of operation	6,000	6,000
Annual kWh	274,800	209,400
Annual cost of electricity**	\$32,976	\$25,128
Annual savings	–	\$7,848
Percent savings	–	24%
Initial cost***	\$17,985	\$16,328
Payback (years)	–	0.2

Based on this scenario, \$76,823 would be saved over 10 years of operation.

\*Cost per luminaire based on Access Fixtures made in USA luminaires with 22" acrylic refractor

\*\*Assumes an electricity cost of \$0.12 per kWh

\*\*\*Fixture costs based on single fixture price before freight and will vary depending on volume purchased

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