



# TECHNICAL BULLETIN METAL HALIDE LAMP

**Metal Halide Retrofit from HPS  
EYE Multi Metal Ace™  
M400X/U/LU**

**ANSI Code:**

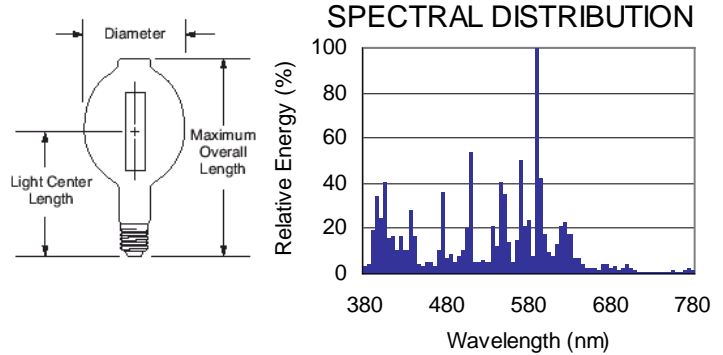
**Product Code: 51837**

**Features:**

- Works in all HPS lighting systems with an ignitor
- Improves color rendering index from 20 CRI to 60 CRI
- Excellent lamp to lamp color consistency
- Nickel-plated base
- Applications-Parking lots, manufacturing, warehouse

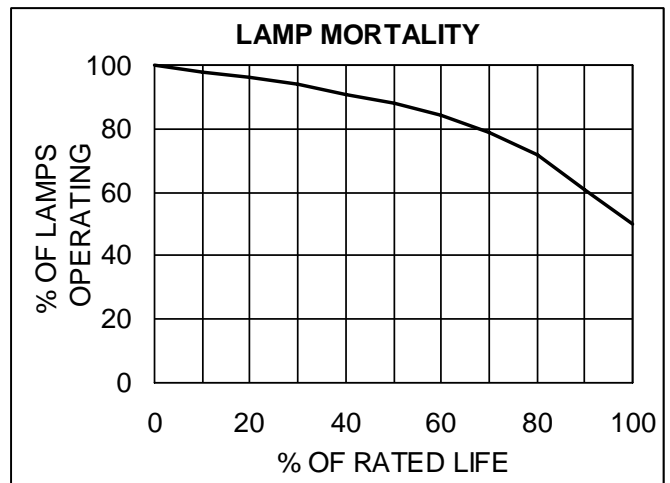
### PERFORMANCE DATA

Initial lumens at rated watts after 100 hours operation	36600V 32700H	lm
Mean lumens at 10 hours/start	27300V 24400H	lm
Average life	20000V 15000H	h
Warm up time, maximum	4	min
Correlated color temperature	4500	K
CIE chromaticity	0.364, 0.381	X, Y
Color rendering index (Ra)	65	
Operating Position	Base up-Horizontal	
Time to hot re-start, maximum	15	min



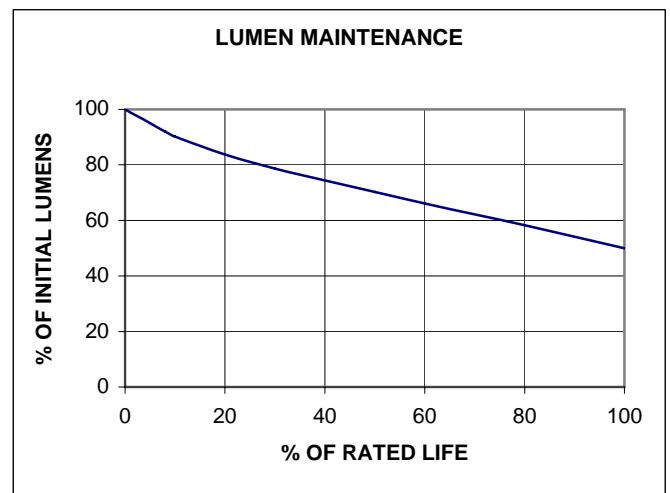
### ELECTRICAL CHARACTERISTICS

Nominal lamp wattage	400	W
Nominal lamp voltage	100	V
Nominal lamp current	4.6	A <sub>rms</sub>
Maximum current crest factor	1.8	-
Maximum starting current	7.5	A <sub>rms</sub>
Minimum starting current	4.6	A <sub>rms</sub>
Ballast requirements	Use with ballast rated for ANSI S51 lamp	
Open circuit voltage (CWA) -30°C (-22°F)	175	V <sub>rms</sub>
	248	V <sub>peak</sub>
Lamp holder voltage rating	4	kV
<b>IGNITOR REQUIREMENTS</b>		
Min. Pulse Height	2500	v
Max. Pulse Height	4000	v
Min. Pulse Width	1.0@2250	µsec@V
Min. Pulse repetition	1	half cycle
Pulse Positions	60-90	degrees
	240-270	



### PHYSICAL DESCRIPTION

Maximum overall length	291 (11.45)	mm (in)
Light center length	146 (5.75)	mm (in)
Bulb diameter	117 (4.63)	mm (in)
Max. base - bulb eccentricity	3	deg
Maximum base temperature	210 (410)	°C (°F)
Maximum bulb temperature	400 (752)	°C (°F)
Bulb designation	BT37	
Bulb material	Borosilicate (Hard Glass)	
Arc tube material	Quartz	
Effective arc length	42 (1.65)	mm (in)
Bulb finish	Clear	
Base designation	E39 Mogul	



### FIXTURE REQUIREMENT

- E Rated-Enclosed, universal burning position
- S Rated-Open fixture, base up or base down +/- 15°

ISO 9001:2008 Certified    ISO 14001:2004 Certified

OSHAS 18001:2007 Certified    ISO 17025:2005 Accredited



**EYE LIGHTING INTERNATIONAL  
OF NORTH AMERICA, INC.**

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# TECHNICAL BULLETIN

## METAL HALIDE

Metal Halide Retrofit from HPS  
EYE Multi Metal Ace™  
M400X/U/LU

### ⚠ WARNING

This lamp can cause serious skin burn and eye inflammation from short-wave ultraviolet radiation if outer envelope of the lamp is broken or punctured. Do not use where people will remain for more than a few minutes unless adequate shielding or other safety precautions are used. Lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available.

#### RISK OF ELECTRIC SHOCK

- Turn power off before inspection, installation or removal
- Protect lamp from direct contact with liquids to avoid breakage from thermal shock

#### RISK OF FIRE

- Keep combustible materials away from lamp during operation

#### UNEXPECTED LAMP RUPTURE MAY CAUSE INJURY, FIRE, OR PROPERTY DAMAGE

- Do not exceed rated ballast voltage
- Do not use lamp if outer glass is scratched or broken.
- Do not use beyond rated life
- Do not turn on lamp until fully installed
- Use only with a fixture and ballast rated for this product
- Turn lamp off at least once a week for 15 minutes
- Electrically insulate any metal to glass support in fixture

### ⚠ CAUTION

#### RISK OF BURN

- Allow lamp to cool before handling.

#### LAMP MAY SHATTER AND CAUSE INJURY

- Do not use excessive force when installing lamp
- Dispose of lamp in a closed container

### LAMP OPERATING INSTRUCTIONS

This is a discharge lamp and requires some time to restart and come up to full brightness after a power interruption. If power supply dips or is interrupted, lamps may extinguish and not restart. Turn off power supply for 10-15 minutes and allow lamp to fully cool. Lamp will restart when power is restored.

**R**

Conforms to:  
USA: 21CFR1040.30 Canada: ANSI 136.1-2000

### Hg-LAMP CONTAINS MERCURY

Manage in Accord with Disposal Laws  
See: [www.lamprecycle.org](http://www.lamprecycle.org) or 1-888-665-2677

ISO 9001:2000 Certified



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