



# Metal Halide Pulse Start Specifications

## 450 Watt Pulse Start Metal Halide Lamps

### Performance Data

| Item # | Description         | ANSI Designation | Light Output (Lumens @ 100 Hrs.) | Lamp Lumens Per Watt | Mean Output (Lumens) | Related Life (Hours @ 10 Hr./Start) | Correlated Color Temperature K | Chromaticity (CIE-X,Y) | Color Rendering Index (CRI) | Warm Up Time (Minutes) | Hot Restart Time (Minutes) | Burning Position |
|--------|---------------------|------------------|----------------------------------|----------------------|----------------------|-------------------------------------|--------------------------------|------------------------|-----------------------------|------------------------|----------------------------|------------------|
| 46290  | MS 450W/V/PS        | M144/E           | 50000                            | 111                  | 40000                | 20000                               | 4000                           | .385<br>.390           | 65                          | 2-3                    | 4-6                        | V±15°            |
| 46291  | MS 450W/C/V/PS      | M144/E           | 47000                            | 104                  | 37000                | 20000                               | 3700                           | .395<br>.390           | 70                          | 2-3                    | 4-6                        | V ±15°           |
| 46292  | MP 450W/BU/UVG/PS   | M144/O           | 47000                            | 104                  | 37000                | 20000                               | 4000                           | .385<br>.390           | 65                          | 2-3                    | 5-8                        | BU ±15°          |
| 46293  | MP 450W/C/BU/UVG/PS | M144/O           | 45000                            | 100                  | 36000                | 20000                               | 3700                           | .395<br>.390           | 70                          | 2-3                    | 5-8                        | BU ±15°          |

Note: C designates a coated outer jacket

ANSI Designation: E = Enclosed rated luminaire, O = Open rated luminaire

### Physical Data / Requirements:

|                                 |                    |                    |
|---------------------------------|--------------------|--------------------|
| Base Designation -----          | Mogul (E39)        | Mogul (EX39)       |
| Bulb Designation -----          | ED37 (MS)          | ED37 (MP)          |
| Bulb Diameter -----             | 4 $\frac{5}{8}$ "  | 4 $\frac{5}{8}$ "  |
| Max. Overall Length (MOL) ----- | 11 $\frac{1}{2}$ " | 11 $\frac{1}{2}$ " |
| Light Center Length (LCL) ----- | 7"                 | 7"                 |
| Effective Arc Length -----      | 43.6 mm            | 43.6 mm            |
| Max. Base Temperature (°C) ---- | 230                | 230                |
| Max. Bulb Temperature (°C) ---- | 450                | 450                |
| Luminaire Type -----            | Enclosed           | Open               |
| Socket Pulse Rating (KV) -----  | 3-4                | 3-4                |
| Socket Style -----              | Mogul              | Mogul              |

### Electrical Data / Requirements:

|                                              |           |
|----------------------------------------------|-----------|
| Lamp Wattage -----                           | 450       |
| Operating Voltage (Nominal) -----            | 135       |
| Operating Current (Amps) -----               | 3.7       |
| Min. Open Circuit Voltage (RMS) -----        | 254       |
| Min-max starting pulse peak (Peak V) -----   | 3000-4000 |
| Min. Pulse Width at 2700 volts (u sec) ----- | 1         |
| Min. Pulse Rate per ½ Cycle -----            | 1         |
| Pulse Position (Min. % OCV Peak) -----       | 90        |

### Notes:

Special open rated socket is required (EX39) for MP lamps.

UV Guard™ reduces normal UV emissions by 90%.

MP lamps are open luminaire rated and contain shrouded arc tubes.

Lamps are not warranted for rated life when operated on ballasts with less than the 270V minimum sustaining voltage (Vss) required in new ANSI specifications.

Contact ballast manufacturer to find out if their CWA ballasts meet this and other specification requirements.

Pulse Start lamps require an ignitor for starting.

