

# METALARC® PULSE START

High Lumen Maintenance, Reduced Color Shift, Premium Metal Halide Lamps



SYLVANIA METALARC® PULSE START 175, 200, 250, 320, 320/350, 350/400, 400, 750 and 1000 watt lamps provide less color shift, high lumen maintenance and a long life. Their premium performance provides opportunities for higher maintained illumination levels and substantial energy savings. Additional increases in optical efficiency may be gained by fixture designs using compact outer jacket configurations. All high wattage pulse start lamps are lead free.

SYLVANIA METALARC PULSE START lamps combine proven metal halide lamp technology and ignitor technology. The result is a more transparent arc tube over life yielding less color shift and high lumen maintenance.

## Key Features & Benefits

### METALARC PULSE START Lamps

- Excellent lumen maintenance
- Quicker hot restrike\*
- Long average rated life

### 175 Watt PULSE START

- 50% longer life than standard 175 watt
- 21% higher initial lumens and 38% higher mean lumens than standard product
- Available in universal operating position

### 200 Watt PULSE START

- 20% energy savings over 250 watt lamp

### 250 Watt PULSE START

- 18,000 hour life rating for MS types (doubles the life of standard 250 watt)
- MP type has 50% longer life than standard 250 watt
- Available with PRO-TECH® design for open fixture use
- Available in universal operating position

### 320 Watt PULSE START

- May be operated base-up through horizontal
- Compact ED28 size allows higher luminaire efficiency

### 320/350 Watt PULSE START

- Available in PRO-TECH design for open fixture use
- Lamp can be operated on 320 or 350 watt ballast

### 350/400 Watt PULSE START

- Incorporates PRO-TECH design for open fixture use
- Lamp can be operated on 350 or 400 watt ballast

### 400 Watt PULSE START

- Available in PRO-TECH design for open fixture use
- Available with Compact ED28 version for higher luminaire efficiency
- Available in universal operating position

### 750 Watt PULSE START

- 25% energy savings over standard 1000 watt metal halide
- Compact BT37 outer jacket

### 1000 Watt PULSE START

- Compact BT37 outer jacket
- Available in universal operating position

\*Compared to standard metal halide lamps.

## Product Offering

| Product                   | Lamp Finish    | Fixture Type          |
|---------------------------|----------------|-----------------------|
| M175/PS/U/ED28            | Clear          | Enclosed fixture only |
| MS175/PS/BU-ONLY/ED28     | Clear          | Enclosed fixture only |
| MS175/PS/BU-ONLY/MED      | Clear          | Enclosed fixture only |
| MS200/PS/BU-ONLY/ED28     | Clear          | Enclosed fixture only |
| MP250/PS/BU-ONLY          | Clear          | Open or enclosed      |
| MS250/PS/BU-ONLY/ED28     | Clear & Coated | Enclosed fixture only |
| M250/PS/U/ED28            | Clear          | Enclosed fixture only |
| MS320/PS/BU-HOR/ED28      | Clear & Coated | Enclosed fixture only |
| MP320/350/PS/BU-ONLY/BT28 | Clear          | Open or enclosed      |

| Product               | Lamp Finish    | Fixture Type          |
|-----------------------|----------------|-----------------------|
| MP350/400/PS/BU-ONLY  | Coated         | Open or enclosed      |
| MP400/PS/BU-ONLY      | Clear & Coated | Open or enclosed      |
| MS400/PS/BU-ONLY/ED28 | Clear          | Enclosed fixture only |
| MS400/PS/BD-ONLY/ED28 | Clear          | Enclosed fixture only |
| MS400/PS/BU-ONLY/ED37 | Clear          | Enclosed fixture only |
| M400/PS/U//ED28       | Clear          | Enclosed fixture only |
| M400/PS/U/ED37        | Clear          | Enclosed fixture only |
| MS750/PS/BU-HOR/BT37  | Clear          | Enclosed fixture only |
| M1000/U/PS/BT37       | Clear          | Enclosed fixture only |



---

## Application Information

### Applications

- Ambient lighting: Industrial and Commercial
- Canopy lighting
- Flood lighting
- Parking lots
- Security lighting

### Application Notes

Operating orientation: Base-up only within 15° of vertical. 320W and 750W lamps may be operated base-up through horizontal. M250/PS/U/ED28, M400/PS/U/ED37, M400/PS/U/ED28 and M1000/U/PS/BT37 may be operated in any operating position.

### Socket Information

Lamps operate in standard mogul HID sockets rated to withstand 4000 volt pulses. Exclusionary mogul sockets are recommended for the METALARC PRO-TECH (MP) versions.

### Ballast Information

All lamps will operate on ANSI Pulse Start ballasts with ignitors for metal halide lamps as noted in the Ordering and Specification Information section (page 3 of this PIB).

### Fixtures

Consult your local fixture agent for available fixtures.

---

## Lamp Comparison

| Lamp Type                                     | Initial Lumens | Mean Lumens | Hot Restrike | Average Rated Life (hrs.) |
|---|----------------|-------------|--------------|---------------------------|
| 400 Watt PULSE START<br>MS400/PS/BU-ONLY/ED37 | 42,000         | 29,500      | 5 to 7 min.  | 20,000                    |
| 400 Watt SUPER METALARC<br>MS400/BU-ONLY/ED37 | 42,000         | 26,000      | 7 to 12 min. | 20,000                    |
| 400 Watt Standard                             | 36,000         | 23,500      | 7 to 12 min. | 20,000                    |

- 14% higher mean lumens than the 400 Watt SUPER METALARC lamps
- 26% higher mean lumens than the standard 400 Watt METALARC lamps

## Specification Data

|             |      |
|-------------|------|
| Catalog #   | Type |
| Project     |      |
| Comments    |      |
| Prepared by |      |

### Ordering Information

| Item Number | Ordering Abbreviation     | Watts      | Finish | Bulb | Base <sup>1</sup> | ANSI Code                     | Average Rated Life (hrs.) | Initial Lumens       | Mean Lumens        | CRI      | Color Temp     | Lamp Efficacy (LPW) |
|-------------|---------------------------|------------|--------|------|-------------------|-------------------------------|---------------------------|----------------------|--------------------|----------|----------------|---------------------|
| 64171*      | MS175/PS/BU-ONLY/MED      | 175        | Clear  | ED17 | E26               | M152/E <sup>2</sup>           | 15,000                    | 17,500               | 12,800             | 65       | 4000K          | 100                 |
| 64043       | M175/PS/U/ED28            | 175        | Clear  | ED28 | E39               | M152/E <sup>2</sup>           | 12,000V<br>9,000H         | 13,500V<br>11,800H   | 9,300V<br>7,650H   | 65       | 4000K          | 77V<br>67H          |
| 64815*      | MS175/PS/BU-ONLY          | 175        | Clear  | ED28 | E39               | M152/E <sup>2</sup>           | 15,000                    | 17,500               | 12,800             | 65       | 4000K          | 100                 |
| 64044*      | MS200/PS/BU-ONLY/ED28     | 200        | Clear  | ED28 | E39               | M136/E <sup>2</sup>           | 15,000                    | 19,000               | 13,500             | 65       | 4000K          | 95                  |
| 64789       | MP250/PS/BU-ONLY          | 250        | Clear  | BT28 | EX39              | M153/O <sup>2</sup>           | 15,000                    | 22,000               | 15,500             | 65       | 4200K          | 88                  |
| 64047       | MS250/PS/BU-ONLY/ED28     | 250        | Clear  | ED28 | E39               | M153/E <sup>2</sup>           | 18,000                    | 21,500               | 16,000             | 65       | 4000K          | 86                  |
| 64048*      | MS250/C/PS/BU-ONLY/ED28   | 250        | Coated | ED28 | E39               | M153/E <sup>2</sup>           | 18,000                    | 20,000               | 14,500             | 65       | 3700K          | 80                  |
| 64046       | M250/U/PS/U/ED28          | 250        | Clear  | ED28 | E39               | M153/E <sup>2</sup>           | 15,000V<br>12,000H        | 21,000V<br>17,000H   | 15,400V<br>10,500H | 65       | 4000K          | 88V<br>68H          |
| 64049       | MS320/PS/BU-HOR/ED28      | 320        | Clear  | ED28 | E39               | M154/E <sup>2</sup>           | 18,000V<br>15,000H        | 30,000V<br>28,000H   | 21,000V<br>19,700H | 65       | 4000K          | 94V<br>88H          |
| 64050*      | MS320/C/PS/BU-HOR/ED28    | 320        | Coated | ED28 | E39               | M154/E <sup>2</sup>           | 18,000V<br>15,000H        | 30,000V<br>28,000H   | 15,500V<br>14,500H | 65       | 3900K          | 94V<br>88H          |
| 64391*      | MP320/350/PS/BU-ONLY/BT28 | 320<br>350 | Clear  | BT28 | EX39              | M154/O<br>M131/O <sup>2</sup> | 20,000<br>20,000          | 28,600<br>33,500     | 21,000<br>24,000   | 65<br>65 | 3800K<br>3600K | 89<br>96            |
| 64770       | MP350/400/C/PS/BU-ONLY    | 350<br>400 | Coated | BT37 | EX39              | M131/O <sup>2</sup><br>M155/O | 20,000<br>20,000          | 32,000<br>39,000     | 23,000<br>23,300   | 65<br>65 | 3500K<br>3300K | 91<br>98            |
| 64052*      | MS400/PS/BU-ONLY/ED28     | 400        | Clear  | ED28 | E39               | M155/E                        | 20,000                    | 40,000               | 32,500             | 65       | 4000K          | 100                 |
| 64053*      | MS400/PS/BD-ONLY/ED28     | 400        | Clear  | ED28 | E39               | M155/E                        | 20,000                    | 40,000               | 32,500             | 65       | 4000K          | 100                 |
| 64055       | MS400/PS/BU-ONLY/ED37     | 400        | Clear  | ED37 | E39               | M155/E                        | 20,000                    | 42,000               | 29,500             | 65       | 4000K          | 105                 |
| 64051       | M400/PS/U/ED28            | 400        | Clear  | ED28 | E39               | M155/E                        | 20,000V<br>15,000H        | 36,000V<br>31,000H   | 25,500V<br>22,400H | 65       | 4000K          | 90V<br>78H          |
| 64054       | M400/PS/U/ED37            | 400        | Clear  | ED37 | E39               | M155/E                        | 20,000V<br>15,000H        | 36,000V<br>31,000H   | 25,500V<br>22,400H | 65       | 4000K          | 90V<br>78H          |
| 65109       | MP400/PS/BU-ONLY          | 400        | Clear  | BT37 | EX39              | M155/O                        | 20,000                    | 40,000               | 24,500             | 65       | 3500K          | 100                 |
| 65110       | MP400/C/PS/BU-ONLY        | 400        | Coated | BT37 | EX39              | M155/O                        | 20,000                    | 39,000               | 23,000             | 65       | 3300K          | 98                  |
| 64787       | MS750/PS/BU-HOR/BT37      | 750        | Clear  | BT37 | E39               | M149/E <sup>3</sup>           | 20,000V<br>9,000H         | 78,000V<br>68,000H   | 57,000V<br>50,000H | 65       | 4000K          | 104V<br>91H         |
| 64351       | M1000/U/PS/BT37           | 1000       | Clear  | BT37 | E39               | M141/E                        | 15,000V<br>9,000H         | 110,000V<br>107,800H | 86,000V<br>84,000H | 65       | 4000K          | 110V<br>108H        |

\*Contact your local LEDVANCE sales representative for availability.

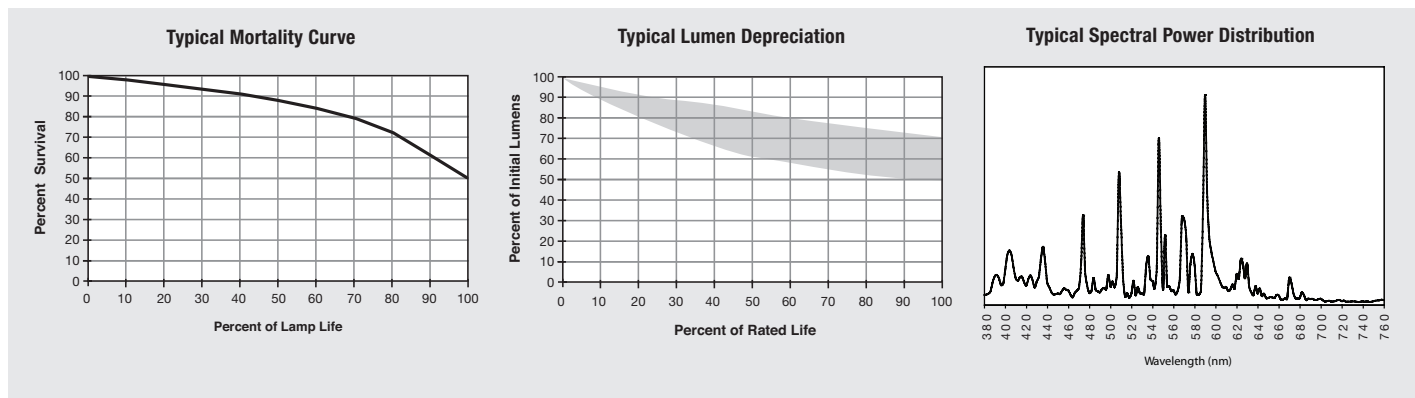
#### Notes:

1. For lamp wattages of 360W and greater, it is recommended that lampholders with nickel-plated copper alloy center contacts (with spring) should be used rather than electrical contacts made of stainless steel.
  2. When operated on ballasts having a sustaining voltage less than 270V, lamp life may be significantly reduced.
  3. When operated on ballasts having a sustaining voltage less than 310V, lamp life may be significantly reduced.
- E = Lamps classified as E-type are to be used ONLY in suitably enclosed luminaires. See lamp warning.  
O = Lamps classified as O-type, comply with ANSI standard C78.389 for containment testing and may be used in open and enclosed luminaires. See lamp warning.

### Ordering Guide

|  |                                    |   |                    |   |                |   |   |
|--|------------------------------------|---|--------------------|---|----------------|---|---|
| <b>MS</b>                                    | <b>320</b>                         | / | —                  | / | <b>PS</b>      | / | <b>BU-ONLY</b>                          |
| M = METALARC<br>Metal Halide                 | Wattage:<br>175, 200, 250,         |   | Finish:<br>= Clear |   | PULSE<br>START |   | BU-ONLY = Base up only<br>U = Universal |
| S = SUPER high output                        | 320, 320/350,                      |   | C = Coated         |   |                |   | BD-ONLY = Base down only                |
| P = METALARC PRO-TECH®<br>open fixture rated | 350/400, 400,<br>750 or 1000 watts |   |                    |   |                |   | BU-HOR = Base up - Horizontal           |

## Technical Information



## Lamp Dimensions

| Ordering Abbreviation | (A) MOL | (B) LCL | (C) Bulb Diameter |
|-----------------------|---------|---------|-------------------|
| ED17                  | 5.43"   | 3.5"    | 2.13"             |
| BT28/ED28             | 8.31"   | 5.0"    | 3.5"              |
| BT37/ED37             | 11.5"   | 7.0"    | 4.63"             |

ED17      BT28/BT37/ED28/ED37

## Sample Specification

400 Watt: Lamp(s) shall be (a) 400W METALARC® PULSE START lamp(s) exhibiting initial lumens of 42,000 with a 74% mean lumen maintenance and capable of operating on a M155 ballast. Lamp construction shall include a lead-free base.

## Safety Information

**WARNING!** These lamps can cause serious skin burn and eye inflammation from short-wave ultraviolet radiation if the 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 punctured or broken are commercially available.

This product conforms to the following federal regulations: U.S.A.: 21 CFR 1040.30 and CANADA: SOR/80-381.

LEDVANCE LLC  
 200 Ballardvale Street  
 Wilmington, MA 01887 USA  
 Phone 1-800-LIGHTBULB (1-800-544-4828)  
 www.sylvania.com

SYLVANIA and LEDVANCE are registered trademarks.  
 All other trademarks are those of their respective owners.  
 Licensee of product trademark SYLVANIA in general lighting.  
 Specifications subject to change without notice.

/sylvania      /sylvania

