

METALARC® POWERBALL® Ceramic

High CRI, Ceramic Metal Halide Medium & Mogul Lamps



METALARC POWERBALL Ceramic E17, ED17, BT28, BT37, ET18 and ET23.5 high wattage lamps meet today's color critical needs by combining conventional metal halide pulse start characteristics such as good efficacy and long life with improved lamp-to-lamp color consistency and high CRI (R9).

Compared to conventional quartz metal halide products, SYLVANIA POWERBALL Ceramic arc tube metal halide lamps exhibit less color variation and higher efficacy.

METALARC POWERBALL Ceramic lamps feature a superior performance, spherical arc tube geometry that maximizes lumen output, lumen maintenance color consistency and lamp life.

They operate on existing ANSI specified magnetic ballasts and on compatible electronic ballasts. The lamps can be used in

Key Features & Benefits

Advantages of POWERBALL Ceramic Arc Tube Technology

- Up to 94 CRI and excellent red rendering (R9), yields more natural and vibrant colors and crisp whites
- Long life and high efficacy
- Superior color stability over the life of the lamp
- Improved lamp-to-lamp color consistency*
- METALARC PRO-TECH® design for open fixture applications. It significantly reduces UV output and minimizes discoloration and fading of materials
- Pulse start arc tube technology
- Open fixture rated products improve fixture efficiency and simplify maintenance
- QUICK 60+® System Warranty when paired with QUICKTRONIC® MH electronic metal halide ballasts

*Compared to standard metal halide lamps.



appropriate existing fixtures designed for metal halide lamps of similar wattages and configurations. To maximize energy savings, system performance and system warranty, consider operating these lamps on QUICKTRONIC MH electronic metal halide ballasts.

Product Offering

| Wattage | Bulb Shape | Outer Jacket | Fixture |
|----------------------------|-------------------------|------------------|------------------------|
| 50, 70, 100, 150, 250, 320 | E17, ED17, BT28, BT37 | Clear and Coated | Open or Enclosed Rated |
| 70, 100, 150, 200 | E17, ED17, ET18, ET23.5 | Clear and Coated | Enclosed Rated Only |

See Notes Section for more fixture information.

Application Information

Applications

- Accent lighting
- Display lighting
- Flood lighting
- Industrial high bays
- Landscape luminaires
- Recessed downlights
- Retail

Application Notes

METALARC Ceramic protected (MCP) E17, ED17, BT28 and BT37 lamps are rated for use in both open and enclosed rated fixtures. METALARC Ceramic (MC) E17, ED17, E18 and ET23.5 lamps are rated for use in enclosed fixtures only.

Ballast Information

Contact your OSRAM SYLVANIA representative or visit www.sylvania.com for a list of compatible electronic control systems and download the latest Ballast Technology & Specification Guide.



Specification Data

| | |
|----------------------|------|
| Fixture Description: | Type |
| Project/Job: | |
| SYLVANIA lamp: | |
| SYLVANIA ballast: | |
| Notes: | |

Ordering Information

For Open or Enclosed Rated Fixtures

| Item Number | Ordering Abbreviation | Watts | Bulb | ANSI ³ Base | Rated Code | Average Initial Life (hrs.) | Mean Lumens | Lumens | CCT | CRI | Lamp Efficacy (LPW) |
|-------------|--|-------|------|------------------------|------------|-----------------------------|-------------|--------|-------|-----|---------------------|
| 64742 | MCP50/U/MED/830 PB | 50 | ED17 | Med. | C110/O | 12,000 | 4,100 | 2,850 | 3000K | 88 | 82 |
| 64849 | MCP50/C/U/MED/830 PB | 50 | ED17 | Med. | C110/O | 12,000 | 3,800 | 2,640 | 2900K | 88 | 76 |
| 64739 | MCP70/U/MED/830 PB | 70 | ED17 | Med. | C98/O | 20,000 | 5,900 | 4,365 | 3000K | 88 | 84 |
| 64740 | MCP70/C/U/MED/830 PB | 70 | ED17 | Med. | C98/O | 20,000 | 5,500 | 3,900 | 3000K | 88 | 79 |
| 64111 | MCP70/U/MED/940 PB | 70 | ED17 | Med. | C98/O | 20,000 | 6,000 | 4,320 | 4000K | 93 | 86 |
| 64112 | MCP70/C/U/MED/940 PB | 70 | ED17 | Med. | C98/O | 20,000 | 5,600 | 4,000 | 3800K | 93 | 80 |
| 64743 | MCP100/U/MED/830 PB | 100 | ED17 | Med. | C90/O | 20,000 | 9,000 | 6,500 | 3000K | 88 | 90 |
| 64744 | MCP100/C/U/MED/830 PB | 100 | ED17 | Med. | C90/O | 20,000 | 8,100 | 5,100 | 3000K | 88 | 81 |
| 64322 | MCP100/U/MED/940 PB | 100 | ED17 | Med. | C90/O | 20,000 | 8,200 | 6,150 | 4000K | 93 | 82 |
| 64741 | MCP150/U/MED/830 PB | 150 | ED17 | Med. | C102/O | 20,000 | 13,000 | 9,200 | 3000K | 88 | 87 |
| 64742 | MCP150/C/U/MED/830 PB | 150 | ED17 | Med. | C102/O | 20,000 | 11,700 | 8,100 | 3000K | 88 | 78 |
| 64260 | MCP200/PS/BU-ONLY/940 ⁴ | 200 | BT28 | EX39 | C190/O | 20,000 | 21,000 | 17,000 | 4200K | 90 | 105 |
| 64786 | MCP250/PS/BU-ONLY/940 PB ^{1,4} | 250 | BT28 | EX39 | C153/O | 20,000 | 24,000 | 19,200 | 4200K | 94 | 96 |
| 64821 | MCP250/C/PS/BU-ONLY/940 PB ^{1,4} | 250 | BT28 | EX39 | C153/O | 20,000 | 22,500 | 18,000 | 4000K | 94 | 90 |
| 64834 | MCP320/PS/BU-ONLY/840/BT37 PB ⁴ | 320 | BT37 | EX39 | C154/O | 20,000 | 36,000 | 28,000 | 4000K | 92 | 113 |
| 64851 | MCP320/C/PS/BU-ONLY/840/BT37 PB ⁴ | 320 | BT37 | EX39 | C154/O | 20,000 | 34,500 | 26,800 | 4000K | 92 | 108 |

For Enclosed Rated Fixtures Only

| | | | | | | | | | | | |
|-------|----------------------------------|-----|--------|------|--------|--------|--------|--|-------|----|-----|
| 64862 | MC70/U/MED/830 | 70 | E17 | Med. | C98/E | 20,000 | 6,500 | 4,850 | 3000K | 88 | 93 |
| 64864 | MC100/U/MED/830 | 100 | E17 | Med. | C90/E | 20,000 | 9,700 | 7,150 | 3000K | 88 | 97 |
| 64918 | MC100/U/ET23.5/942 | 100 | ET23.5 | E39 | C90/E | 24,000 | 10,000 | 7,000 | 4200K | 94 | 100 |
| 64915 | MC150/U/ET23.5/942 | 150 | ET23.5 | E39 | C102/E | 24,000 | 15,000 | 10,500 | 4200K | 90 | 100 |
| 64917 | MC200/PS/U/ET18/940 ⁴ | 200 | ET18 | E39 | C190/E | 24,000 | 21,500 | 16,125V ^{4,5} 15,050H ^{4,5} | 4000K | 95 | 106 |

1. Some M138 Ballasts will meet the requirements of M153 and can be used to operate this lamp. If operated on a ballast having sustaining voltage less than 270V, lamp life will be significantly reduced.

2. Wattage will be slightly lower on magnetic ballasts.

3. The first letter of the ANSI code represents the lamp type; "C" for ceramic metal halide and "M" for quartz metal halide. The numbers following the lamp type refer to the electrical characteristics required by the ballast to start and operate the lamp reliably. Ceramic, "C", or quartz, "M" lamps with the same electrical characteristic number will operate on the same ballast (per ANSI C78.380-2007). For example, a 150W ceramic lamp with a C102 designation will operate on a 150W metal halide ballast with an M102 designation and vice versa.

4. Only operates on electronic ballast

General Notes:

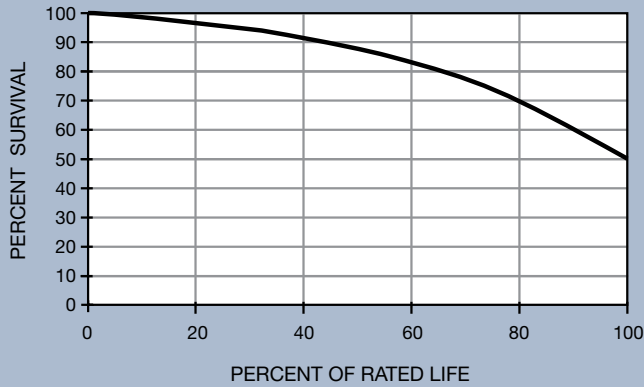
- Contact your local OSRAM SYLVANIA representative for compatible electronic ballasts.
- All ceramic lamps should be used with 4000V pulse rated socket only.

Ordering Guide

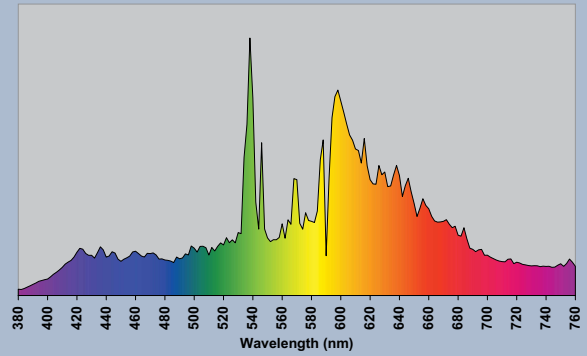
| MCP | 70 | / C | / PS | / U | / MED | / 830 | / BT37 | PB |
|----------------------|--------------|------------|-------|------------------------|-------------------------|----------------------------------|--------------|---------------|
| M = METALARC® | Wattage: | C = Coated | Pulse | Operating | Base: | 8=80+ CRI | Bulb size | PB=POWERBALL® |
| C = Ceramic | 50, 70, 100, | _ = Clear | Start | position: | MED=Medium | 9=90+ CRI | E17, ED17, | |
| P = Protected | 150, 200, | | | U = Universal | EX39=Exclusionary Mogul | 30=2900K, 3000K | BT28, BT37 | |
| (METALARC PRO-TECH®) | 250, 320 | | | BU-Only = Base Up Only | | 40=3800K, 3900K, 4000K, 4200K | ET18, ET23.5 | |

Technical Information

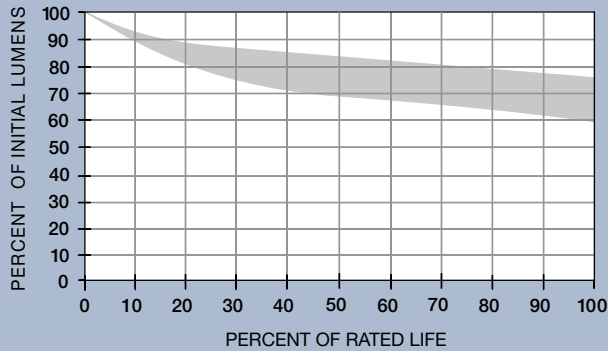
Typical Mortality Curve



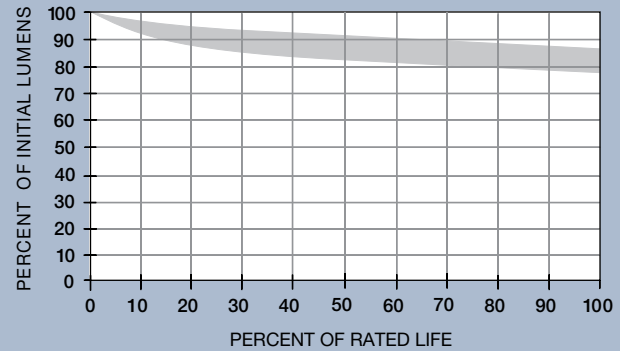
Typical Spectral Power Distribution



Typical Lumen Maintenance Curve (with Magnetic Ballasts)

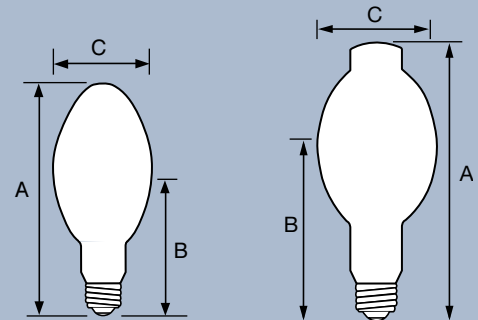


Typical Lumen Maintenance Curve for 50W to 250W (with QUICKTRONIC® Electronic Ballasts)



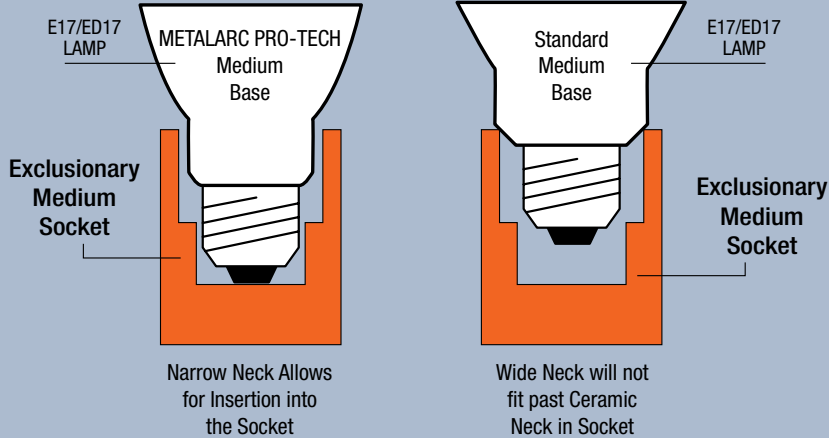
Lamp Dimensions

| Lamp Shape | (A) MOL | (B) LCL | (C) Bulb Diameter |
|------------|-----------------|-----------------|----------------------|
| E17 | 5.43" (137.9mm) | 3.39" (86.1mm) | 2.13" (54.1mm) |
| ED17 | 5.00" (127.0mm) | 3.00" (76.2mm) | 2.125" (54.0mm) |
| ET18 | 9.75" (247.7mm) | 5.75" (146.1mm) | 2.25" (57.2mm) |
| ET23.5 | 6.97" (251.7mm) | 4.49" (114.0mm) | 2.94" (74.7mm) |
| BT28 | 8.31" (211.1mm) | 5.00" (127.0mm) | 3.50" (88.9mm) |
| BT37 | 11.5" (292.1mm) | 7.01" (178.1mm) | 4.60" (116.8mm) |

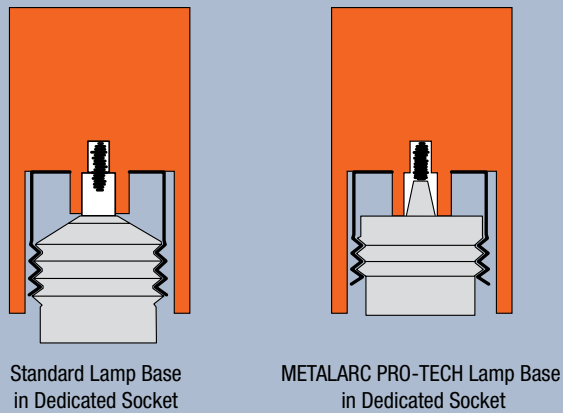


Exclusionary Socket for METALARC PRO-TECH® Lamps

Medium Based Dedicated Socket Comparison



Mogul Based Dedicated Socket Comparison



National Electric Code 2005 and later revision require new construction and/or major renovations to use exclusionary sockets (ex. EX39) in open fixtures, or fixture with a lens.

Related Literature

QUICKTRONIC® MH 20W-100W Electronic Metal Halide Systems (Literature Code: ECS054)

QUICKTRONIC QHE MH 200W-400W High Efficiency Electronic Metal Halide Systems (Literature Code: ECS123)

WARNING: This lamp can cause serious skin burn and eye inflammation from shortwave 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 broken or punctured are commercially available.



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Sample Specification

Lamp(s) shall be METALARC® POWERBALL® Ceramic MC70/U/MED/830 lamp(s), and shall be constructed with a spherical ceramic arc-tube with initial lumens of 6,500 and an average rated life of 20,000 hours. Lamp(s) shall have a CRI of 88, CCT of 3000K, and shall exhibit a maximum color shift of $\pm 150K$ over life. Lamps shall be rated for enclosed fixture use only.

Lamp(s) shall be METALARC PRO-TECH® POWERBALL Ceramic MCP70/U/MED/830 lamp(s), and shall be constructed with a spherical ceramic arc-tube with initial lumens of 5,900 and an average rated life of 20,000 hours. Lamp(s) shall have a CRI of 88, CCT of 3000K, and shall exhibit a maximum color shift of $\pm 150K$ over life. Lamps shall be rated for enclosed fixture use only.

Lamps shall be operated on QUICKTRONIC® MH electronic metal halide ballasts and the system shall be covered by the SYLVANIA QUICK 60+® System Warranty.

United States

OSRAM SYLVANIA
100 Endicott Street
Danvers, MA 01923
1-800-LIGHTBULB

Trade

Phone: 800-255-5042
Fax: 800-255-5043

National Accounts

Phone: 800-562-4671
Fax: 800-562-4674

OEM/Special Markets

Phone: 800-762-7191
Fax: 800-762-7192

Retail

Phone: 800-842-7010
Fax: 800-842-7011

SYLVANIA Lighting Services

Phone: 800-323-0572
Fax: 800-537-0784

Display/Optic

Phone: 888-677-2627
Fax: 855-543-1043

Canada

OSRAM SYLVANIA LTD.
2001 Drew Road
Mississauga, ON L5S 1S4
1-800-LIGHTBULB

Trade

Phone: 800-263-2852
Fax: 800-667-6772

OEM/Special Markets/Display/Optic

Phone: 800-265-2852
Fax: 800-667-6772

Retail

Phone: 800-720-2852
Fax: 800-667-6772

SYLVANIA Lighting Services

Phone: 800-663-4268
Fax: 866-239-1278

Mexico

OSRAM MEXICO

Tultitlan/Edo de Mexico
Phone: 011-52-55-58-99-18-50

ENCELIUM® Products

United States

Phone: 201-508-1570
Fax: 201-508-1589

Canada

Phone: 905-731-7678
Fax: 905-731-1401

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