

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:

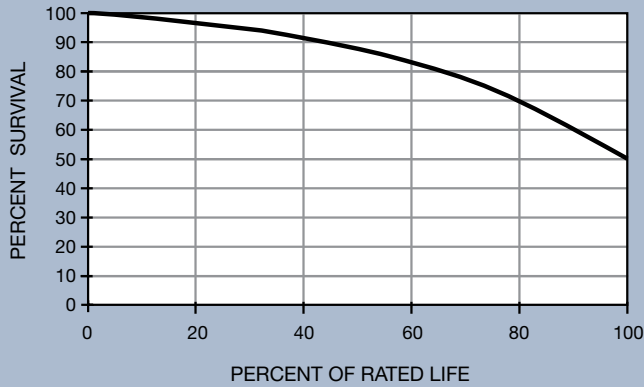
- Contact your local OSRAM SYLVANIA representative for compatible electronic ballasts.
- All ceramic lamps should be used with 4000V pulse rated socket only.

Ordering Guide

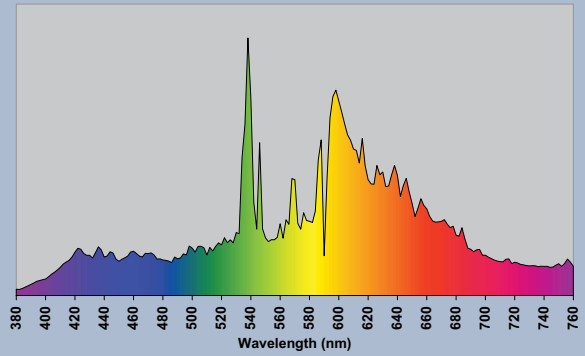
MCP	70	/ C	/ PS	/ U	/ MED	/ 830	/ BT37	PB
M = METALARC®	Wattage:	C = Coated	Pulse	Operating	Base:	8=80+ CRI	Bulb size	PB=POWERBALL®
C = Ceramic	50, 70, 100,	_ = Clear	Start	position:	MED=Medium	9=90+ CRI	E17, ED17,	
P = Protected	150, 200,			U = Universal	EX39=Exclusionary Mogul	30=2900K, 3000K	BT28,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

Technical Information

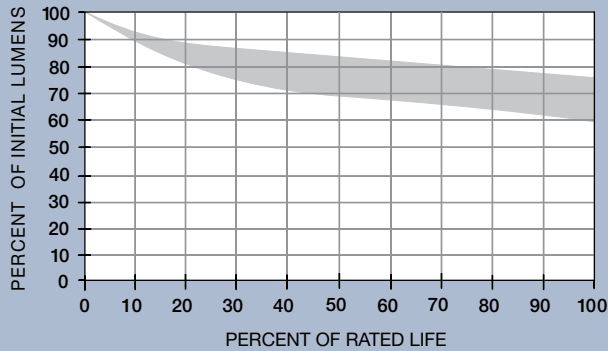
Typical Mortality Curve



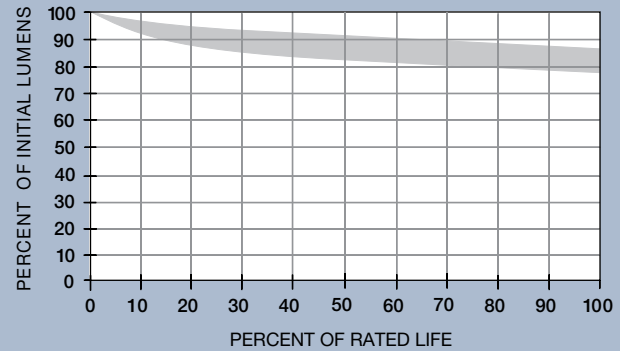
Typical Spectral Power Distribution



Typical Lumen Maintenance Curve (with Magnetic Ballasts)

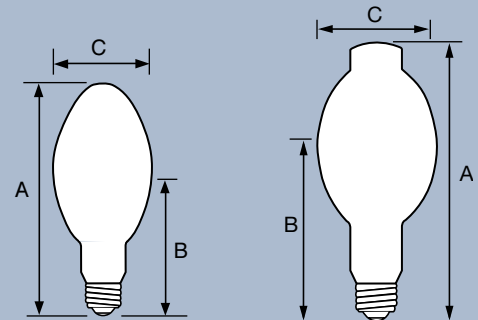


Typical Lumen Maintenance Curve for 50W to 250W (with QUICKTRONIC® Electronic Ballasts)



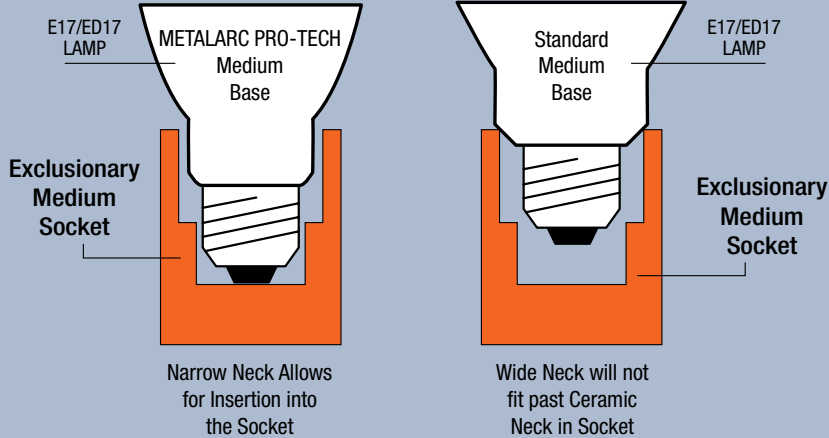
Lamp Dimensions

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)

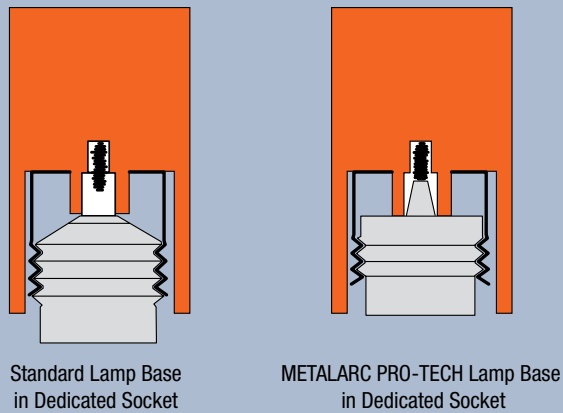


Exclusionary Socket for METALARC PRO-TECH® Lamps

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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