

# MasterColor® Ceramic Metal Halide Tubular Double-Ended Lamps



Photo Courtesy of Buhl Industries, Inc.-NJ

***Ideal for retail display lighting,  
general and indirect lighting  
and wall washing***

- ▶ **Excellent Color Rendering**  
82–88 CRI for 3K; 92–96 CRI for 4K
- ▶ **Superior Color Stability Over Life**  
Within  $\pm 200\text{K}$
- ▶ **Lamp to Lamp Color Consistency Over Life**
- ▶ **Higher Lumen Maintenance**  
Improved lumen maintenance over standard metal halide
- ▶ **Total Cost of Ownership Benefits**
  - High lamp efficacy (up to 95 LPW)
  - Energy-efficient alternative to incandescent/halogen
  - Operates on existing ballasts
- ▶ **Application Versatility**
  - Compact lamp dimensions enable luminaire design flexibility and optical control
  - RX7s base maintains precise light source centering
- ▶ **FadeBlock™**  
Lamps feature integrated UV blocking medium for reduced fading of fabrics and paintings



# PHILIPS

# MasterColor® Ceramic Metal Halide Tubular Double-Ended Lamps

Electrical, Technical and Ordering Data (Subject to change without notice)

For Use In Enclosed Fixtures Only

Bulb Temperature (Maximum) . . . . .	500°C (650°C for 150W)	Re-start Time for Hot Lamps . . . . .	4-8 minutes
Bulb Press Temperature (Maximum) . . . . .	280°C (300°C for 150W)	Base . . . . .	Recessed Single Contact (RX7s)
RMS Lamp Operating Current (Amps) Nominal . . . . .	0.98 (70W)	Operating Position . . . . .	Horizontal ± 45 degrees
. . . . .	1.8 (150W)	Luminaire Type . . . . .	Enclosed Only
Lamp Current Crest Factor (Maximum) . . . . .	1.8	Standard Package Quantity . . . . .	12
Warm-up Time to 80% Full Brightness . . . . .	2 minutes		

Product Number	Ordering Code	Nominal Wattage	ANSI* Code	Bulb	Base	MOL (In.)	LCL (In.)	Rated Avg. Life (Hrs.) <sup>1</sup>	Approx. Initial Lumens <sup>2</sup>	Approx. Mean Lumens <sup>3</sup>	CRI	CCT (Kelvin)
23160-5	CDM70TD/830/	70	M139/M85/E	TD-6	RX7s	4 1/4	2 1/4	15,000	6500	5200	82	3000
37370-4	CDM70TD/942	70	M139/M85/E	TD-6	RX7s	4 1/4	2 1/4	15,000	6000	4500	92	4200
23167-0	CDM150TD/830	150	M142/M102/M81E	TD-7	RX7s	5 3/4	2 1/2	15,000	13,250	11,260	88	3000
37371-2	CDM150TD/942	150	M142/M102/M81E	TD-7	RX7s	5 3/4	2 1/2	15,000	14,200	12,070	96	4200

1) Rated average life is the life obtained, on the average, from large representative groups of lamps in laboratory tests under controlled conditions at 10 or more operating hours per start. It is based on survival of at least 50% of the lamps and allows for individual lamps or groups of lamps to vary considerably from the average.  
 2) Approximate lumen values listed are for vertical operation of the lamp.  
 3) Approximate lumen output at 40% of lamp rated average life.

**WARNINGS, CAUTIONS AND OPERATING INSTRUCTIONS for MasterColor® Ceramic Metal Halide Lamps: Single-Ended CDM-T G12, CDM-TC G8.5 (Universal); Double-Ended CDM-TD RX7 (Horizontal ± 45°, Enclosed Fixtures Only)**

**R**“WARNING: These lamps 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. Certain lamps that will automatically extinguish when the outer envelope is broken or punctured are commercially available.” This lamp complies with FDA radiation performance standard 21 CFR subchapter J, (USA:21CFR 1040.30 Canada:SOR/DORS/80-381)

**If the outer bulb is broken or punctured, turn off at once and replace the lamp to avoid possible injury from hazardous short wave ultraviolet radiation. Do not scratch the outer bulb or subject it to pressure as this could cause the outer bulb to crack or shatter. A partial vacuum in the outer bulb may cause glass to fly if the envelope is struck.**

**WARNING:** The arc-tube of metal halide lamps are designed to operate under high pressure and at temperatures up to 1000° C and can unexpectedly rupture due to internal or external factors such as a ballast failure or misapplication. If the arc-tube ruptures for any reason, the outer bulb may break and pieces of extremely hot glass might be discharged into the surrounding environment. If such

a rupture were to happen, **THERE IS A RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE. Certain lamps that will retain all the glass particles should inner arc-tube rupture occur are commercially available from Philips Lighting Company.**

**RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE. Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.**

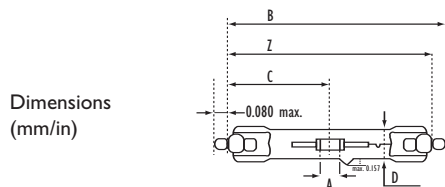
**This lamp contains an arc tube with a filling gas containing Kr-85 and is distributed by Philips Lighting Company, a division of Philips Electronics North America Corporation, Somerset, New Jersey, 08875.**

**CAUTION: TO REDUCE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, BURNS AND FIRE RESULTING FROM AN ARC-TUBE RUPTURE THE FOLLOWING LAMP OPERATING INSTRUCTIONS MUST BE FOLLOWED:**

**LAMP OPERATING INSTRUCTIONS:**

1. RELAMP FIXTURES AT OR BEFORE THE END OF RATED LIFE. Allowing lamps to operate until they fail is not advised and may increase the possibility of inner arc tube rupture.
2. Use only in fully enclosed fixtures capable of withstanding particles of glass having temperatures up to 1000° C. Lens/diffuser material must be heat resistant. Consult fixture manufacturer regarding the suitability of the fixture for this lamp.
3. Do not operate a fixture with a missing or broken lens/diffuser.
4. Operate lamp only within specified limits of operating position.

5. Before lamp installation/replacement, shut power off and allow lamp and fixture to cool to avoid electrical shock and potential burn hazards.
6. Use only auxiliary equipment meeting Philips and/or ANSI standards. Use within voltage limits recommended by ballast manufacturer.
  - A. Operate lamp only within specified limits of operation.
  - B. For total supply load refer to ballast manufacturers electrical data.
7. C. Operate CDM-T (G12 base) and CDM-TC (G8.5 base) lamps only on thermally protected ballasts.
8. D. Operate CDM-TC lamps (G8.5 base) only on electronic ballasts.
7. Periodically inspect the outer envelope. Replace any lamps that show scratches, cracks or damage.
8. If a lamp bulb support is used, be sure to insulate the support electrically to avoid possible decomposition of the bulb glass.
9. Protect lamp base, socket and wiring against moisture, corrosive atmospheres and excessive heat.
10. Time should be allowed for lamps to stabilize in color when turned on for the first time. This may require several hours of operation, with more than one start. Lamp color is also subject to change under conditions of excess vibration or shock and color appearance may vary between individual lamps.
11. Lamps may require 4 to 8 minutes to re-light if there is a power interruption.
12. Take care in handling and disposing of lamps. If an arc tube is broken, avoid skin contact with any of the contents or fragments.



Dimensions (mm/in)

Type	A max.	Z max.	B max.	C max.	D max.	Base
CDM 70/TD	.315/8	4.496/114.2	4.630/117.6	2.248/57.1	.827/21	RX7s
CDM 150/TD	.394/10	5.197/132.0	5.331/135.4	2.598/66.0	.945/24	RX7s

