


**TRAC-MASTER®**

 MH<sub>v</sub>™ Metal Halide Trac

# CONCENTRIC CYLINDER MINI MasterColor BT-5, PGJ5 LAMP HOLDERS

**TM233**

Project: \_\_\_\_\_

Fixture Type: \_\_\_\_\_

Location: \_\_\_\_\_

Contact/Phone: \_\_\_\_\_

## PRODUCT DESCRIPTION

The ultra-compact Concentric Cylinder combines a simple aesthetic with premium performance. Available in spot, narrow flood and flood beam distributions, its computer contoured highly polished faceted specular aluminum reflector is securely mounted to the lamp shroud for precise optical alignment with the lamp. The lamp shroud has a 1" deep integral step baffle for optimal shielding and brightness control. The detachable lamp shroud is easily removed for simplified fixture maintenance. Uniform light distribution is accomplished with a clear lens for maximum luminaire efficiency. The clear lens can be replaced with a variety of 2.75" media accessories for optimum beam control. Combined with the new vertical ballast design, the MH<sub>v</sub> Series offers practical functionality with one of the smallest footprints in CMH Trac fixtures.



Mini MasterColor BT-5 ceramic metal halide lamps produce light output equivalent to halogen lamps of 3-4 times the wattage. They produce a crisp, white light in 3000K color temperature with a color rendering index of up to 90. Combined with new electronic ballast technology, these lamps last up to 12,000 hours with no perceived shift in color temperature. Ceramic metal halide trac fixtures are ideal for accent and perimeter lighting from higher ceilings and/or to create dramatic accents in settings, such as display windows, where contrast with high ambient light levels are required.

## PRODUCT SPECIFICATIONS

**Construction** Die cast aluminum socket housing and lamp shroud • Coarse thread attachment of socket housing and lamp shroud simplifies fixture maintenance • Die formed steel yoke.

**Socket** PGJ5 twist & lock bi-pin base, ceramic/PPS • 2.5kV rated with nickel plated contacts.

**Aiming** Full 360° horizontal coverage eliminates aiming dead spots • 90° vertical aiming capability.

**Optics** Computer contoured highly polished faceted specular aluminum reflector is securely mounted to lamp shroud for precise optical alignment with lamp and facilitates simplified relamping • Choice of spot, narrow flood or flood optical distributions • Lamp shroud has 1" deep integral baffle for optimal shielding and brightness control • Uniform light distribution is accomplished with clear lens for maximum luminaire efficiency.

**Lens** Fixture includes clear glass lens • Lens may be replaced with 2.75" dia. media accessory listed below to customize lighting effects.

**Juno Universal Trac Adapter** Universally compatible with both Trac-Master 1-circuit or 2-circuit trac, Trac-Lites trac, monopoints and special mountings • Also UL Recognized for use on ConTech® LT Series track • Oversized trac adapter for greater mounting stability • Copper alloy contacts provide precise spring action – no arcing and will not take a set • True, positive electrical ground • On /off switch included • Patented embossed polarity arrows on bottom of adapter • Spring-loaded positive latch with embossed polarity arrows secures trac light to trac • Two-position power contact provided for two-circuit application.

**Alternate GTYPE Trac Adapter** Compatible with track systems based on GES type track, including Lithonia LT Commercial Track (not LTS type) • System specific and assembled to trac fixture • Consult factory for additional information.

**Alternate HTYPE Trac Adapter** Compatible with track systems which use a H-type track adapter, including Lithonia LTS Decorative Track (not LT type) • System specific and assembled to trac fixture • Two-position power contact provided for two-circuit application • Consult factory for additional information.

**Alternate LTYPE Trac Adapter** Compatible with track systems which use a L-type track adapter • System specific and assembled to trac fixture • Two-position power contact provided for two-circuit application • Consult factory for additional information.

**Ballast** Premium, high efficiency electronic enclosed in an extruded aluminum monolith

• Provides optimum color stability and CRI uniformity from fixture to fixture • Controlled lamp output ensures stable normal operation maximizing lamp life • Faster hot restrike and lamp warm-up time compared to magnetic ballast • Automatic resetting thermal protection • MOV transient protection • End-of-life shutdown prevents nuisance cycling and flashing.

**Labels** UL and C-UL Listed • Union made • Assembled in U.S.A.

Specifications subject to change without notice.

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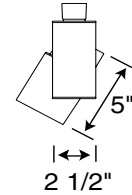
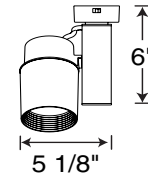
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**TRAC-MASTER®**MH<sub>v</sub><sup>™</sup> Metal Halide Trac**CONCENTRIC CYLINDER MINI MasterColor BT-5, PGJ5  
LAMP HOLDERS****TM233****ORDERING INFORMATION**

Ordering Examples: TM233 20M FL BL, TM233 GTYPE 39M NFL WH

**Lamp** 20W or 39W BT-5 PGJ bi-pin base ceramic metal halide lamp.

Series	Mounting Adapter Type	Lamp Type	Distribution	Finish
<b>TM233</b> BT-5 Metal Halide	<b>(Blank)</b> Universal 120V Trac Adapter	<b>20M</b> 20W Metal Halide	<b>FL</b> Flood	<b>BL</b> Black
	<b>GTYPE</b> G-Type Trac Adapter	<b>39M</b> 39W Metal Halide	<b>NFL</b> Narrow Flood	<b>SL</b> Silver
	<b>HTYPE</b> H-Type Trac Adapter		<b>SP</b> Spot	<b>WH</b> White
	<b>LTYPE</b> L-Type Trac Adapter			



Accessories			
<b>CGF 275</b>	Color Glass Filter	<b>PRISM 275</b>	Prismatic Spread Glass Lens
<b>DGF 275</b>	Dichroic Glass Filter	<b>LSPREAD 275</b>	Linear Spread Glass Lens
<b>DCCF 275</b>	Dichroic Color Correction Filter	<b>TMR1 BT5 SPT</b>	HID Reflector - Spot
<b>DIFF 275</b>	Diffusion Glass Lens	<b>TMR1 BT5 NFLD</b>	HID Reflector - Narrow Flood
<b>UVF 275</b>	UV Filter	<b>TMR1 BT5 FLD</b>	HID Reflector - Flood
<b>SOLITE 275</b>	Uniformity Lens (Solite)		

See specification sheet [D1.2.0](#) and [D1.2.2](#) for details

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MHV™ Metal Halide Trac

## CONCENTRIC CYLINDER MINI MasterColor BT-5, PGJ5 LAMP HOLDERS

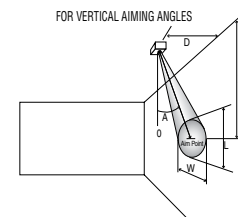
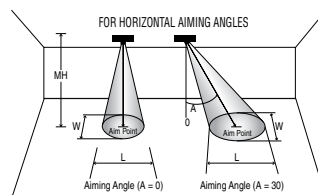
TM233

### ENGINEERING DATA

	20W	39W
ANSI #	C-175	C-179
Input Voltage	120V	120V
Input Current	0.23A	0.40A
Input Power	26W	45W
Power Factor	>.90	>.90
Ballast Factor	1.0 Typ.	1.0 Typ.
T.H.D.	<15%	<15%
Max. Recommended Ambient		
Operating Temperature	40° C	40° C
EMI	FCC Part 18	FCC Part 18
	Class B	Class B
Sound Rating	A	A

**CBCP** • Centerbeam candlepower  
**FC** • Footcandles at beam center (aim point)

In vertical aiming applications, aim point (X) is determined by dividing distance from the wall (D) by the tangent of the desired aim angle (A) (0.5774 for 30°, 1.0 for 45°, 1.732 for 60°).



Lamp	Beam Type	Beam Spread	Rated Life	CBCP	0°				30°			45°				60°									
					MH	FC	L	W	FC	L	W	D	FC	X	L	W	FC	X	L	W	D	FC	X	L	W
<b>39W Mini MasterColor BT-5 Ceramic Metal Halide</b>	SP	10°	12000	30016	10	300	1.7	1.7	195	2.3	2.0	4	235	6.9	2.9	1.4	663	4.0	1.4	1.0	6	542	3.5	0.9	0.8
					12	208	2.1	2.1	135	2.8	2.4	6	104	10.4	4.3	2.1	295	6.0	2.1	1.5	9	241	5.2	1.4	1.2
					14	153	2.4	2.4	99	3.3	2.8	8	59	13.9	5.7	2.8	166	8.0	2.8	2.0	12	135	6.9	1.9	1.6
					16	117	2.8	2.8	76	3.7	3.2	10	38	17.3	7.2	3.5	106	10.0	3.5	2.5	15	87	8.7	2.3	2.0
					18	93	3.1	3.1	60	4.2	3.6	12	26	20.8	8.6	4.2	74	12.0	4.2	3.0	18	60	10.4	2.8	2.4
	NFL	20°	12000	10745	8	168	2.8	2.8	109	3.8	3.3	2	336	3.5	3.1	1.4	950	2.0	1.5	1.0	4	436	2.3	1.0	0.8
					10	107	3.5	3.5	70	4.8	4.1	4	84	6.9	6.2	2.8	237	4.0	2.9	2.0	6	194	3.5	1.9	1.6
					12	75	4.2	4.2	48	5.7	4.9	6	37	10.4	9.3	4.2	106	6.0	4.4	3.0	8	109	4.6	2.9	2.4
					14	55	4.9	4.9	36	6.7	5.7	8	21	13.9	12.4	5.6	59	8.0	5.8	4.0	10	70	5.8	3.8	3.3
					16	42	5.6	5.6	27	7.6	6.5	10	13	17.3	15.6	7.1	38	10.0	7.3	5.0	12	48	6.9	4.8	4.1
	FL	28°	12000	6147	8	96	4.0	4.0	62	5.4	4.6	2	192	3.5	4.9	2.0	543	2.0	2.1	1.4	2	998	1.2	1.4	1.2
					10	61	5.0	5.0	40	6.8	5.8	3	85	5.2	7.4	3.0	241	3.0	3.2	2.1	3	444	1.7	2.0	1.7
					12	43	6.0	6.0	28	8.1	6.9	4	48	6.9	9.8	4.0	136	4.0	4.3	2.8	4	250	2.3	2.7	2.3
					14	31	7.0	7.0	20	9.5	8.1	5	31	8.7	12.3	5.0	87	5.0	5.3	3.5	5	160	2.9	3.4	2.9
					16	24	8.0	8.0	16	10.9	9.2	6	21	10.4	14.7	6.0	60	6.0	6.4	4.2	6	111	3.5	4.1	3.5

Multiplier: For 20W lamps use 0.55 multiplier

The beam spread in degrees and the beam "L" and "W" in the following tables are computed at 50% of centerbeam candlepower and represent areas of "effective illumination."