

MB-CTL



Wavelengths from 1050nm to 1650nm are now offered in the Metaphase Spotlight. Short-wave infrared technology provides the necessary contrast to illuminate test objects that visible and ultraviolet light cannot provide. The SWIR Spotlight is built with a quartz convex lens for high SWIR transmission that provides a uniform spot of light for a 1.5" FOV for front light applications or can be used as a collimated backlight for telecentric applications.



Available Wavelengths



FEATURES

- Collimated spot size of 1.5 inches (3.81 cm)
- Passive thermal management design draws heat directly from the die ensuring long life
- Compact housing for easy integration
- Built-in Constant Current Driver with 0-10VDC Intensity Control, Compatible with DDC-3 and ILD-35 Dimmers
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- Optional mounting bracket available
- 5° collimation angle

WAVELENGTH (nanometers)

W	White 6000K, Nominal
IR05	1050nm
IR20	1200nm
IR30	1300nm
IR45	1450nm
IR55	1550nm
IR65	1650nm

SPECIFICATIONS

Power Source:	24VDC ±5%
Cable (Standard):	10 ft. (3 m) with flying leads
Housing:	Black Anodized Aluminum
Ambient Temperature:	-20°C to 40°C

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SWIR Spotlight							
MODEL	Length Inches (mm)	Lens Diameter Inches (mm)	Weight lbs (grams)	Cable QTY	Cable Length	Cable Description	Typical Input Current
MB-CTL41	6.3 (159.54)	1.6 (40.23)	0.9 (408.2)	1	10ft	24 AWG 4-conductor	0.4A

Wiring (flying leads)**	
Wire Color	Function
RED	+24VDC
WHITE	0-10VDC INTENSITY CONTROL
BLACK	GROUND (24V RTN)
GREEN	SIGNAL GROUND

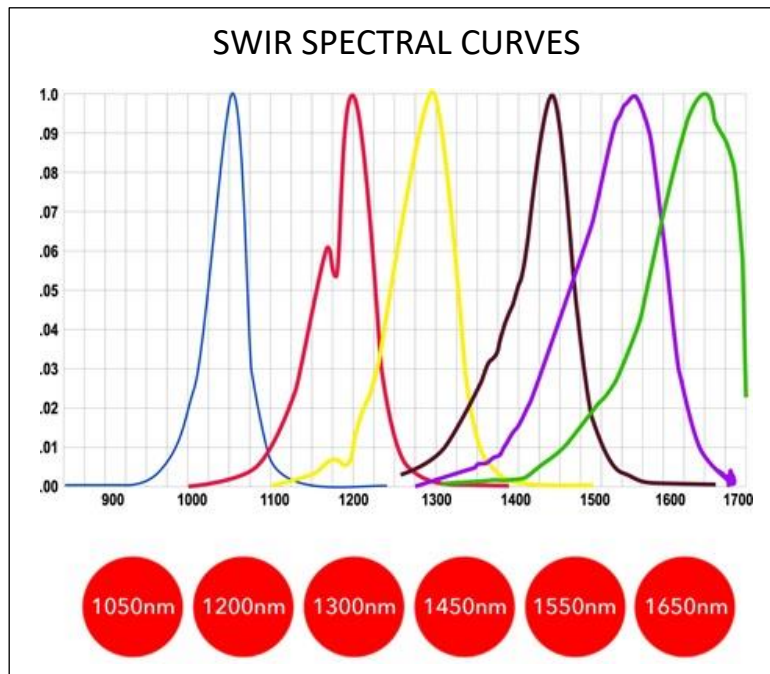
M12 (5 position male)**	
Pin #	Function
1	+24VDC
2	0-10VDC Intensity Control
3	GROUND (24V RTN)
4	SIGNAL GROUND
5	No Connection

The M12 connector option is not recommended for lights rated more than 4 amps

Wiring with ULC-2	
Wire Color	Function
RED, WHITE (+)	LED INPUT
BLACK, GREEN (-)	

Terminated within a 2 position ULC-2 output connector
(Phoenix Contact P/N: BCP-508-2)

**Note: The 0-10VDC Intensity Control input can accept voltages from 0-24VDC where the light will operate at full intensity in the 10-24VDC range. The light is proportionally dimmer for any Intensity Control voltage less than 10VDC and the light is OFF at approximately 0V or not connected (floating).



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PART NUMBER KEY									
MODEL	SIZE	-	WAVELENGTH	-	DRIVER* (most common)	-	CABLE LENGTH	-	CONN.** (most common)
MB-CTL	XXX	-	XXXXX	-	XXXXXXX	-	XXX	-	XXXX
MB-CTL	41 (41mm)		W (White 6000K, Nominal) IR05 (Infrared 1050nm) IR20 (Infrared 1200nm) IR30 (Infrared 1300nm) IR45 (Infrared 1450nm) IR55 (Infrared 1550nm) IR65 (Infrared 1650nm)		24Z 24NZ 24-ILSXXX 24-ILD U¹		5M 10M Length can be customized: ex.7M=7meters Select or leave blank for 3 meters		M12D^{1 2} BC^{1 3} Select or leave blank for flying leads
Example 1: MB-CTL41-WIR20-24Z Example 2: MB-CTL41-IR65-24-ILD					¹ Not available in lights exceeding 4A input current ² Default cable length for an M12D connector is 19 inches ³ Default cable length for a Barrel Connector is 10 feet				

Contact Metaphase Technologies or your local representative for options such as custom diffusers, lenses, polarizers, IP-rated enclosures for harsh environments, higher intensity, custom wavelengths, higher uniformity, etc. Not all options are available for all lights.

Link to [*Driver Options Key](#) / [**Connector Options Key](#)

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Sample Part Number: **MB-CTL41-WIR20-24Z**

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
H	REFORMATTED	6/26/2017	
J	ADDED OPTIONAL BRACKET DETAIL SHEET 2	1/26/2018	

OPTIONAL BRACKET
METAPHASE CTL200-56870

(LIGHT ONLY)

Metaphase Technologies, Inc. 211 Sinclair Road, Suite 100, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977

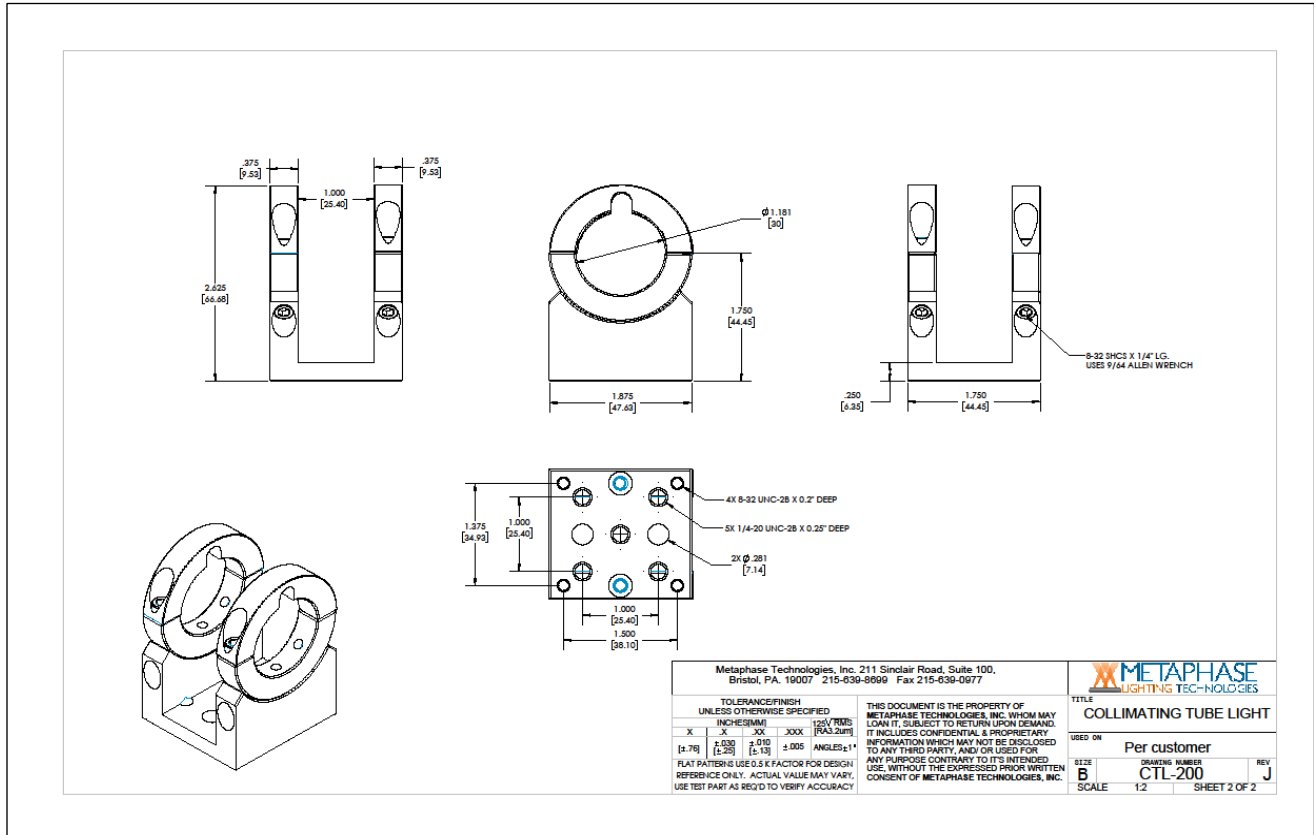
QUANTITY: Per order	TOLERANCE / FINISH UNLESS OTHERWISE SPECIFIED INCHES (MM) 125K / RMS X X .00X .000X [±.76] [±.25] [±.13] ±.005 ANGLES ±1°	THIS DOCUMENT IS THE PROPERTY OF METAPHASE TECHNOLOGIES, INC. WHOM MAY LOAN IT. SUBJECT TO RETURN UPON DEMAND. IT INCLUDES CONFIDENTIAL & PROPRIETARY INFORMATION WHICH MAY NOT BE DISCLOSED TO ANY THIRD PARTY, AND/OR USED FOR ANY PURPOSE CONTRARY TO ITS INTENDED USE, WITHOUT THE EXPRESSED PRIOR WRITTEN CONSENT OF METAPHASE TECHNOLOGIES, INC.	TITLE COLLIMATING TUBE LIGHT
MATERIAL: Per BOM			USED ON Per customer
FINISH: See note			DRAWING NUMBER CTL-200
TREATMENT: N/A			SCALE 1:2 SHEET 1 OF 2

Approval Signature _____ Date // / /

MB-CTL

Mounting Options:

Please contact your local Metaphase representative to learn more about mounting options for the MB-CTL41. The bracket shown below is adjustable with twin-ring mounting clips.



COMPLIANCE



CONTACT US

Contact Metaphase Technologies at **215-639-8699** or your local representative for additional details, options and customizations.