

MB-CBL

Metaphase Technologies Collimated Tube Backlights are ideal for producing high contrast silhouettes. The Collimated Tube Backlight boasts increased illumination compared to standard backlights when used with Telecentric camera lensing. Due to collimated light rays, this Telecentric illumination is ideal for precision measurements where accuracy, repeatability, and throughput are key factors in the application's success.



FEATURES

- Collimated spot size of 1.5 inches (3.81 cm)
- Passive thermal management design draws heat directly from the LED 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-35-24-L Dimmers
- Optional mounting bracket available
- 5° Collimation angle

WAVELENGTH (nanometers)

W	White 6000K, Nominal
R	Red 630nm
G	Green 530nm
B	Blue 470nm
IR850 (or IRN)	Infrared 850nm
IR880 (or IRL)	Infrared 880nm
IR940	Infrared 940nm
UV365 (or UVS)	UV Short 365nm
UV395 (or UVL)	UV Long 395nm

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
Lifetime Expectancy:	75,000 hours (except UV)

MB-CBL

Collimated Tube Backlight								
MODEL	Length Inches (mm)	Lens Diameter Inches (mm)	Weight lbs (grams)	Cable QTY	Cable Length	Cable Description	Typical Input Current	
							Visible	IR/UV
MB-CBL41	6.3 (159.54)	1.6 (40.23)	0.9 (408.2)	1	10ft	24 AWG 4-conductor	0.1A	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).

MB-CBL

MODEL NUMBER KEY							
MODEL	LENS DIAMETER	-	WAVELENGTH	-	OPTION 1	-	OPTION 2
MB-CBL	41	-	XXXX	-	XXX	-	X-XXX
MB-CBL	41 (41mm)		W (White 6000K) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR850 (or IRN) (Infrared 850nm) IR880 (or IRL) (Infrared 880nm) IR940 (Infrared 940nm) UV365 (or UVS) (UV Short 365nm) UV395 (or UVL) (UV Long 395nm)		24 (+24VDC, standard)		T - (M12 quick disconnect)
			Choose one		U (ULC-2 interface) KEY (Keyence Controller) ILD (In Line Dimmer) ILS (In Line Strobe)		XXX (Custom per order)

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.

MB-CBL

Sample Model Number: **MB-CBL41-W-24**

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

Metaphase Technologies, Inc. 211 Sinclair Road, Suite 100, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977		METAPHASE LIGHTING TECHNOLOGIES	
QUANTITY: Per order	MATERIAL: Per BOM	FINISH: See note	TREATMENT: N/A
Approval Signature	Date		

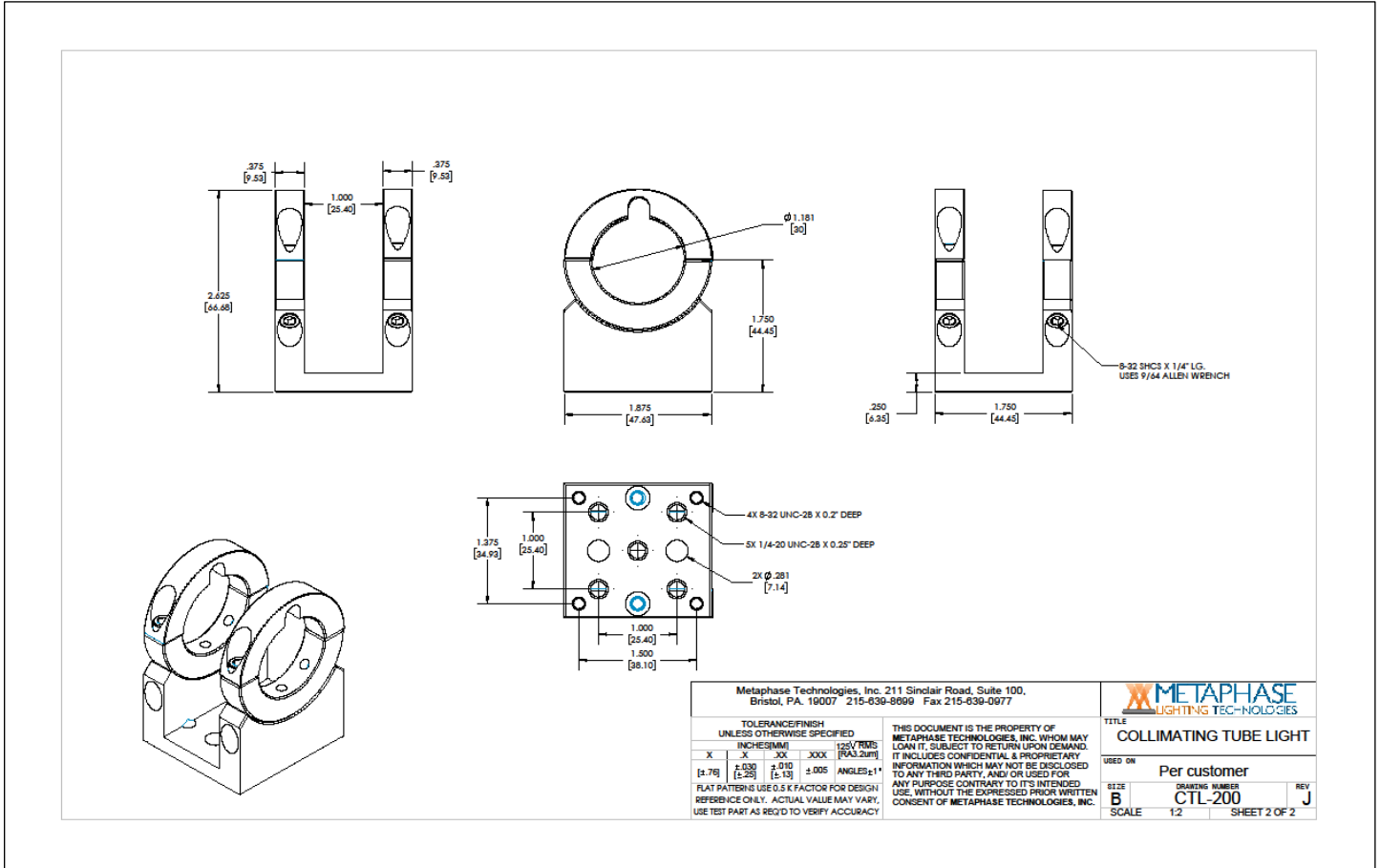
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X	X	
X	X	
X	X	
±.005	±.010	ANGLES ±1°

USED ON Per customer	TITLE COLLIMATING TUBE LIGHT
SIZE B	DRAWING NUMBER CTL-200
SCALE 1:2	REV J
SHEET 1 OF 2	

MB-CBL

Mounting Options:

Please contact your local Metaphase representative to learn more about mounting options for the MB-CBL41. 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.