

MB-CDT

The MetaBright™ Compact Diffused Tube line light is one of the best kept secrets in line scan. It is a low-profile version of Metaphase's diffused tube light with an aperture designed for line scan applications. Its diffused and multi-directional light output makes this light ideal for inspecting highly specular applications. The MB-CDT allows you to see beyond clear plastic and images the product with minimal glare and feedback from the plastic wrap. With its highly diffused light output you can image metallic materials and curved items with minimal glare or hot spotting.



FEATURES

- Compact design and aperture for line scan
- Diffused and multi-directional light output for highly specular applications
- Lengths range from 5 inches to 85 inches
- High Uniformity using Metaphase's unique diffuser technology
- Standard configurations are built without Intensity Control
- Intensity control option is available by adding an In-Line Dimmer (Z option)

WAVELENGTHS

Order ID	Description / nanometers
W	White (6000K), Nominal
R	Red / 630nm
G	Green / 530nm
B	Blue / 470nm
IR850	Infrared / 850nm
IR940	Infrared / 940nm
UV395	Ultraviolet Long / 395nm
RGB	Red-Green-Blue

GENERAL SPECIFICATIONS

Power Source:	24VDC ±5%
Cable (Standard):	10-foot cable with flying leads
Housing:	Black Anodized Aluminum
Ambient Temp:	-20°C to 40°C
Lifetime Expectancy:	75,000 hours (except UV)

MB-CDT

MetaBright™ Compact Diffused Tube Line Lights												
All models: Overall W=3.17", Camera Slot W=0.2"				Cable(s)			*Typical Current (Amps) @24VDC					
MODEL	Overall Length Inches / cm	Camera Slot Length Inches / cm	Weight lbs/Kg	Quantity	Length	AWG/ Conductors	Visible (White, Red, Green, Blue)	IR	UVS	UVL		
MB-CDT106	2.72 / 69.2	2.0 / 5.080	0.5 / .23	1	10ft	24/4	.25A max.					
MB-CDT206	5.72 / 14.54	5.0 / 12.70	1.0 / .45				.45A max.					
MB-CDT306	10.72 / 27.24	10.0 / 25.40	1.8 / .82				1.5A max.					
MB-CDT406	15.72 / 39.94	15.0 / 38.10	2.7 / 1.2				1.9A max.					
MB-CDT506	20.72 / 52.64	20.0 / 50.80	3.5 / 1.6				2.3A max.					
MB-CDT606	25.72 / 65.34	25.0 / 63.50	4.3 / 2.0				2.7A max.					
MB-CDT706	30.72 / 78.04	30.0 / 76.20	5.2 / 2.4			18/4	3.2A max.					
MB-CDT806	35.72 / 90.74	35.0 / 88.90	6.0 / 2.7				3.7A max.					
MB-CDT906	40.72 / 103.4	40.0 / 101.6	6.9 / 3.1				4.3A max.					
MB-CDT1006	45.72 / 116.1	45.0 / 114.3										
MB-CDT1106	50.72 / 128.8	50.0 / 127.0										
MB-CDT1206	55.72 / 141.5	55.0 / 139.7										
MB-CDT1306	60.72 / 154.2	60.0 / 152.4				2	20ft	16/4	5.2A est.			
MB-CDT1406	65.72 / 166.9	65.0 / 165.1							5.6A est.			
MB-CDT1506	70.72 / 179.6	70.0 / 177.8		6.0A est.								
MB-CDT1606	75.72 / 192.3	75.0 / 190.5		6.4A est.								
MB-CDT1706	80.72 / 205.0	80.0 / 203.2										
MB-CDT1806	85.72 / 217.7	85.0 / 215.9										

Wiring (from light or attached ILD)	
Wire Color	Function
RED	+24VDC
WHITE	+24VDC
GREEN	GROUND (24 RTN)
BLACK	GROUND (24 RTN)

M12 (from light or attached ILD)	
Pin #	Function
1	+24VDC
2	+24VDC
3	GROUND (24V RTN)
4	GROUND (24V RTN)
5	No Connection
The M12 connector option is not recommended for lights rated more than 4 amps	

MB-CDT

PART NUMBER KEY									
MODEL	LENGTH ID (inches)	-	WAVELENGTH	-	DRIVER* (most common)	-	CABLE LENGTH	-	CONN.** (most common)
MB-CDT	XXXX	-	XXXXX	-	XXX-XXXXXX	-	XXX	-	XXXX
MB-CDT	106 to 1806 (See above chart)		W (White 6000K, Nominal) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR850 (Infrared 850nm) IR940 (Infrared 940nm) UV395 (UV Long 395nm)		24CV 24-ILZ 24-ILSXXX 24-ILD		5M 10M		M12D^{1 2} BC³
			RGB (Red-Green-Blue)		24-ILZ3 24-ILD3		Length can be customized: ex. 7M=7meters		Select or leave blank for flying leads
Example 1: MB-CDT306-W-24CV-M12D Example 2: MB-CDT906-R-24-ILZ					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](#)

MB-CDT

Sample Model Number: **MB-CDT306-W-24CV**

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	5/19/2016	
B	CHANGED SCREW HOLES TO BE BLIND; REMOVED PREVIOUS SET SCREWS AND SILICONE	5/19/2016	

POWER CABLE
24 AWG Stranded;
2 conductor
10' Cut length

WHITE INTERNAL AREA
FOR SUPERIOR LIGHT
REFLECTION.

BOTTOM VIEW

1.19 [30.23]

.75 [19.05] LIGHT SLOT

10.00 CAMERA SLOT [254]

10.72 [272.39]

3.17 [80.52]

.20 [5.08] CAMERA SLOT

HEAT SINK FINS

MOUNTING FEATURE FOR ADDITIONAL HEAT SINKS. USES M5-0.8 METRIC "T NUTS".

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

FINISH: BLACK ANODIZED W/ INTERIOR PAINTED WHITE - SEE SHEET 3.

Approval Signature _____ / / Date _____

QUANTITY: Per order		TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED		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.
MATERIAL: Per BOM		INCHES(MM)		
X	XX	XXX	(RA3.2UM)	
±.78	±.002 [±.05]	±.010 [±.25]	±.005	ANGLES: 1°

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

TITLE: Top Assembly, CDT306 -10" Light

USED ON: Per customer

SIZE: B	DRAWING NUMBER: CDT306-1	REV: B
SCALE: 1:4	SHEET 1 OF 3	

COMPLIANCE



CONTACT US

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