

HP-CDT

The High Power Compact Diffused Tube line light is one of the best kept secrets in line scan. It is a low profile, wide body version of Metaphase's diffused tube light with an aperture designed for line scan applications. Our High-Power version boasts brightness three times greater than the standard power Compact Diffused Tube Line Light. Its diffused and multi-directional light output makes this light ideal for inspecting highly specular applications. The 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.



HP-CDT (Wide Body)

FEATURES

- Compact design and aperture for line scan
- Diffused and multi-directional light output for highly specular applications
- Lengths range from 2 inches to 85 inches
- High Uniformity using Metaphase's unique diffuser technology
- Standard configurations are built with an In-Line Dimmer for manual intensity control
- Remote Intensity control option is available (ILZ)

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)
Illuminance (white):	170K Lux, minimal

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High Power Compact Diffused Tube Line Lights										
All models: Overall W=5.42", 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
HP-CDT106	2.72 / 69.2	2.0 / 5.080	1.1 / .45	1	10ft	24/4	0.5A max.			
HP-CDT206	5.72 / 14.54	5.0 / 12.70	2.3 / 1.1				1.2A max.			
HP-CDT306	10.72 / 27.24	10.0 / 25.40	4.4 / 2.0				2.0A max.			
HP-CDT406	15.72 / 39.94	15.0 / 38.10	6.4 / 2.9				2.7A max.			
HP-CDT506	20.72 / 52.64	20.0 / 50.80	8.7 / 3.9				3.5A max.			
HP-CDT606	25.72 / 65.34	25.0 / 63.50	10.8 / 4.9				4.5A max.			
HP-CDT706	30.72 / 78.04	30.0 / 76.20	12.9 / 5.8			18/4	5.4A max.			
HP-CDT806	35.72 / 90.74	35.0 / 88.90	15.4 / 7.0				6.3A max.			
HP-CDT906	40.72 / 103.4	40.0 / 101.6	17.9 / 8.1			16/4	7.0A max.			
HP-CDT1006	45.72 / 116.1	45.0 / 114.3	20.1 / 9.1				7.8A max.			
HP-CDT1106	50.72 / 128.8	50.0 / 127.0								
HP-CDT1206	55.72 / 141.5	55.0 / 139.7								
HP-CDT1306	60.72 / 154.2	60.0 / 152.4								
HP-CDT1406	65.72 / 166.9	65.0 / 165.1								
HP-CDT1506	70.72 / 179.6	70.0 / 177.8								
HP-CDT1606	75.72 / 192.3	75.0 / 190.5		2	20ft					
HP-CDT1706	80.72 / 205.0	80.0 / 203.2								
HP-CDT1806	85.72 / 217.7	85.0 / 215.9								

*Custom sizes and configurations are available

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

Wiring/Connections (from attached ILZ)	
Wire Color	Function
RED	+24VDC
WHITE	+24VDC
GREEN	GROUND (24 RTN)
BLACK	GROUND (24 RTN)
+IN (Terminal)	0-10VDC Intensity Control
GND (Terminal)	SIGNAL GROUND

M12 (from attached ILD)	
Pin #	Function
1	+24VDC
2	+24VDC
3	GROUND (24V RTN)
4	GROUND (24V RTN)
5	No Connection
<p style="color: red; font-size: small;">The M12 connector option is not recommended for lights rated more than 4 amps</p>	

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	LENGTH ID (inches)	-	WAVELENGTH	-	DRIVER* (most common)	-	CABLE LENGTH	-	CONN.** (most common)
HP-CDT	XXXX	-	XXXXX	-	XXX-XXXXXX	-	XXX	-	XXXX
HP-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)	-	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 3 meters		Select or leave blank for flying leads
Example 1: HP-CDT806-W-24-ILD Example 2: HP-CDT206-RGB-24-ILZ3					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 Model Number: **HP-CDT706-W-24-ILD**

REVISIONS

REV.	DESCRIPTION	DATE
A	INITIAL RELEASE	11/25/2013
B	CHANGED SCREW HOLES FROM THRU TO BLIND - REMOVED PREVIOUS SET SCREWS AND SILICONE.	5/24/2016
C	CABLE SPEC UPDATE	11/10/2017
D	ADDED I.D BOX	4/26/2018

Dimensions:
 .20 WIDE CAMERA SLOT (CENTERED) [5.08]
 5.42 [137.67]
 30.00 WIDE CAMERA SLOT [762]
 30.73 OVERALL [780.42]
 4.00 [101.60]
 2.84 [72.14]
 #6 FLT HD MOUNTING
 MOUNTING FEATURE SLIDING M5-0.8 METRIC "T NUTS" 4 PER SIDE
 DIRECTION OF LIGHT
 ANGLE MOUNTS FOR CAMERA
 IN LINE DIMMER
 POWER CABLE
 1.69 [42.95]
 1.19 [30.25]
 .75 LIGHT SLOT [19.05]
 WHITE INTERNAL AREA FOR SUPERIOR LIGHT REFLECTION.
 8FT [2.44M]
 2FT [0.61M]

THIS LIGHT IS A HIGH PERFORMANCE VERSION OF THE STANDARD CDT706 30" LIGHT. THIS LIGHT FEATURES ADDED HEATSINKS FOR IMPROVED CONTROL OF THE EXTRA HEAT AND POWER.

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

SEE SHEET 2 FOR EXPLODED VIEW AND BOM.

QUANTITY:	Per order
MATERIAL:	Per BOM
FINISH:	Black Anodized
TREATMENT:	N/A

TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED

INCHES (MM)	125V (RMS) (R33.25UM)	ANGLES ±1°
X .X .XX .XXX	[.76] [1.25] [1.13] [1.05]	

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TITLE
Top Assy.; HP-CDT706 -30" Light

USED ON
Per customer

SIZE
B HP-CDT706-1 SCALE 1:5

REV
D SHEET 1 OF 1

Approval Signature _____ Date ____/____/____

COMPLIANCE



CONTACT US

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