

NWHP-CDT

The Narrow Width High Power Compact Diffused Tube line light is one of the best kept secrets in line scan. It is a low profile, narrow 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 objects. The CDT allows you to see beyond clear plastic and illuminates 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.



NWHP-CDT (Narrow Body)

FEATURES

- Compact design and aperture for line scan
- Diffused and multi-directional light output for highly specular applications
- Lengths range from 5 inches to 80 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 (or IRN)	Infrared / 850nm
IR880 (or IRL)	Infrared / 880nm
IR940	Infrared / 940nm
UV365 (or UVS)	Ultraviolet Short / 365nm
UV395 (or UVL)	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

NWHP-CDT

Narrow Width High Power 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
NWHP-CDT209	5.78 / 14.68	4.6 / 11.68	≈2.9 / 1.3	1	10ft	18/4	1.5A max.			
NWHP-CDT309	10.78 / 27.38	9.6 / 24.38	3.8 / 1.7				2.0A max.			
NWHP-CDT409	15.78 / 40.08	14.6 / 37.08	5.5 / 2.5				2.7A max.			
NWHP-CDT509	20.78 / 52.78	19.6 / 49.78	7.3 / 3.3				3.5A max.			
NWHP-CDT609	25.78 / 65.48	24.6 / 62.48	9.0 / 4.1				4.4A max			
NWHP-CDT709	30.78 / 78.18	29.6 / 75.18	10.8 / 4.9				5.3A max			
NWHP-CDT809	35.78 / 90.88	34.6 / 87.88	12.5 / 5.7				6.3A max			
NWHP-CDT909	40.78 / 103.6	39.6 / 100.6	14.3 / 6.5				7.0A max.			
NWHP-CDT1009	45.78 / 116.3	44.6 / 113.3	16.1 / 7.3				7.8A max.			
NWHP-CDT1109	50.78 / 129.0	49.6 / 126.0								
NWHP-CDT1209	55.78 / 141.7	54.6 / 138.7								
NWHP-CDT1309	60.78 / 154.4	59.6 / 151.4								
NWHP-CDT1409	65.78 / 167.1	64.6 / 164.7								
NWHP-CDT1509	70.78 / 179.8	69.6 / 176.8					2			
NWHP-CDT1609	75.78 / 192.5	74.6 / 189.5								
NWHP-CDT1709	80.78 / 205.2	79.6 / 202.2								

*Custom sizes and configurations are available

NWHP-CDT

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

RGB Wiring (from attached ILD3)	
Wire Color	Function
RED	+24VDC
WHITE	+24VDC
GREEN	GROUND (24 RTN)
BLACK	GROUND (24 RTN)

RGB Wiring/Connections (from attached ILZ3)	
Wire Color	Function
RED	+24VDC
WHITE	+24VDC
GREEN	GROUND (24 RTN)
BLACK	GROUND (24 RTN)
RED +IN (Terminal)	RED 0-10VDC Intensity Control
GND (Terminal)	SIGNAL GROUND
GREEN +IN (Terminal)	GREEN 0-10VDC Intensity Control
GND (Terminal)	SIGNAL GROUND
BLUE +IN (Terminal)	BLUE 0-10VDC Intensity Control
GND (Terminal)	SIGNAL GROUND

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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MODEL NUMBER KEY							
MODEL	SIZE	-	COLOR/WAVELENGTH	-	OPTION 1	-	OPTION 2
NWHP-CDT	XXX	-	XXXXX	-	XXX	-	XXX-XXX
NWHP-CDT	209 (5")		W (White 6000K, Nominal)		24 (+24VDC) (standard)		T (M12 quick disconnect) ILZ (Remote 0-10V Intensity Control) Note: Standard models have an attached ILD with a potentiometer for manual Intensity control. The ILZ option removes the pot and adds two terminals to the box, 0-10V IN and Signal Ground for remote intensity control.
	309 (10")		R (Red 630nm)				
	409 (15")		G (Green 530nm)				
	509 (20")		B (Blue 470nm)				
	609 (25")		IR850 (or IRN) (Infrared 850nm)				
	709 (30")		IR880 (or IRL) (Infrared 880nm)				
	809 (35")		IR940 (Infrared 940nm)				
	909 (40")		UV365 (or UVS) (UV Short 365nm)		U (ULC-2 interface)		
	1009 (45")		UV395 (or UVL) (UV Long 395nm)		KEY (Keyence Controller)		
	1109 (50")						
	1209 (55")						
	1309 (60")		RGB (Red-Green-Blue)			ILZ3 (Remote 0-10V Intensity Control) Note: Standard RGB models have an attached ILD3 with 3 potentiometers for manual Intensity control. The ILZ3 option removes the pots and adds six terminals to the box, 0-10V IN for R, G and B and Signal Grounds for independent remote intensity control.	
	1409 (65")						
1509 (70")							
1609 (75")							
1709 (80")							
						XXX Customizable per order (All Models)	

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.

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Sample Model Number: NWHP-CDT209-W-24

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	11/3/2017	
B	CABLE SPEC UPDATE	11/9/2017	
C	REPLACED CABLE WITH IN LINE DIMMER ASSY. REPLACED BOTH END PLATE WITH COMMON PARTS	1/16/2018	

TOP VIEW

1.59 [40.26]
4.60 SLOT [116.84]
Ø .20 SLOT FOR CAMERA [5.08]

BOTTOM VIEW

2.31 [58.77]
3.17 [80.52]

SIDE VIEW

5.78 [146.81]
INTERNAL AREA IS WHITE
.75 [19.05] LIGHT APERTURE

SLIDING "T" NUTS
M5X0.8 THREAD
2 NUTS PER SIDE

POWER CABLE
18 AWG Stranded;
4 conductor w/ flying
leadwire ends; 10' Lg.

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.

Approval Signature	Date	QUANTITY: Per order	MATERIAL: Per BOM	FINISH: Black Anodize	TREATMENT: N/A
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TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED		120V RMS (RA3.2UM)	
INCHES (MM)			ANGLES ±1°
X	.XX	.XXX	
[±.76]	[±.25]	[±.13]	

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METAPHASE LIGHTING TECHNOLOGIES

TITLE: Top Assy.; 5" NW HP Light

USED ON: Per customer

SIZE: B DRAWING NUMBER: NWHP-CDT-209-1 REV: C SCALE: 1:12 SHEET 1 OF 2

COMPLIANCE



CONTACT US

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