

## 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 line 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	Infrared / 850nm
IR940	Infrared / 940nm
UV395	Ultraviolet Long / 395nm
RGB	Red-Green-Blue

### GENERAL SPECIFICATIONS

<b>Power Source:</b>	24VDC ±5%
<b>Cable (Standard):</b>	10-foot cable with flying leads
<b>Housing:</b>	Black Anodized Aluminum
<b>Ambient Temp:</b>	-20°C to 40°C
<b>Lifetime Expectancy:</b>	75,000 hours (except UV)
<b>Illuminance (white):</b>	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					2			
NWHP-CDT1509	70.78 / 179.8	69.6 / 176.8								
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).

## NWHP-CDT

PART NUMBER KEY									
MODEL	LENGTH ID (inches)	-	WAVELENGTH	-	DRIVER* (most common)	-	CABLE LENGTH	-	CONN.** (most common)
NWHP-CDT	XXXX	-	XXXXX	-	XXX-XXXXXX	-	XXX	-	XXXX
NWHP-CDT	209 to 1709 (See above chart)	-	<b>W</b> (White 6000K, Nominal) <b>R</b> (Red 630nm) <b>G</b> (Green 530nm) <b>B</b> (Blue 470nm) <b>IR850</b> (Infrared 850nm) <b>IR940</b> (Infrared 940nm) <b>UV395</b> (UV Long 395nm)	-	<b>24-ILZ</b> <b>24-ILSXXX</b> <b>24-ILD</b>	-	<b>5M</b> <b>10M</b>	-	<b>M12D<sup>1 2</sup></b> <b>BC<sup>3</sup></b>
			<b>RGB</b> (Red-Green-Blue)		<b>24-ILZ3</b> <b>24-ILD3</b>		Length can be customized: ex. 7M=7meters  Select or leave blank for 3 meters		Select or leave blank for flying leads
Example 1: <b>NWHP-CDT809-W-24-ILD</b> Example 2: <b>NWHP-CDT209-RGB-24-ILZ3</b>					<sup>1</sup> Not available in lights exceeding 4A input current <sup>2</sup> Default cable length for an M12D connector is 19 inches <sup>3</sup> 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](#)

# NWHP-CDT

Sample Model Number: NWHP-CDT209-W-24-ILD

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]

**SIDE VIEW**  
 5.78 [146.81]  
 .75 [19.05] LIGHT APERTURE

**BOTTOM VIEW**  
 2.31 [58.77]  
 3.17 [80.52]

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

INTERNAL AREA IS WHITE

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

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SEE SHEET 2 FOR EXPLODED VIEW AND BOM.  Approval Signature _____ / / Date _____	QUANTITY: Per order MATERIAL: Per BOM FINISH: Black Anodize TREATMENT: N/A	TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED INCHES (MM) X .XX .XXX [RA3.2UM] [±.76] [±.03] [±.010] [±.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: Top Assy.; 5" NW HP Light USED ON: Per customer		DRAWING NUMBER: NWHP-CDT-209-1 SCALE: 1:12 REV: C SHEET 1 OF 2

## COMPLIANCE



## CONTACT US

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