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The MetaLight Line Light is another product in the Metaphase family of LED lights for line scan. Its narrow, structured beam delivers high intensity and concentrated light for a narrow field of view. The high intensity and uniformity allows the MetaLight Line Light to be used as front light to inspect for material defects, angled to obtain an off-axis effect to highlight surface defects or it may be placed beneath the object for a backlight effect to inspect for holes, voids, or contaminants.



FEATURES

- High uniformity both laterally and longitudinally
- High intensity, over 220,000 Lux
- Lens options for various beam widths and working distances
- Adjustable lens focusing range of mm to meters
- Backlight versions for web backlight and silhouetting applications
- Lengths range from 2 inches to 65 inches
- Built-in constant current driver(s)
- Optional 0-10VDC Intensity Control (Z option)
- Compatible with DDC-3 and ILD-35 Dimmers

APPLICATIONS

- Geometry measurements of long targets
- Direct position measurement
- Web inspection (foil, plastic film, PCBs, glass, paper, web converting, etc.)
- Printed circuit board inspection
- Detection of holes in highly transparent films (nonwovens)
- Tube or bottle inspection
- Quality control in food, chemicals, and textile industry
- Fabrics
- Solar Cells
- Hot Steel Inspection

WAVELENGTHS

Order ID	Description / nanometers
W	White (6000K), Nominal
R	Red / 630nm
G	Green / 530nm
B	Blue / 470nm
IR850	Infrared / 850nm
IR880	Infrared / 880nm
IR940	Infrared / 940nm
UV395	Ultraviolet Long / 395nm

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

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MetaLight LINE LIGHTS								
All models: Overall W=1.0", Active area W=.75"				Cable(s)			Current (Amps) @24VDC	
MODEL*	Overall Length Inches / cm	Active Area Length Inches / cm	Weight lbs/Kg	Quantity	Length	AWG/ Conductors	Visable	IR
LL104	3.00 / 7.59	2.25 / 5.72	.5 / .23	1	10ft	24/4	.20A max.	.37A max.
LL204	5.90 / 14.99	5.15 / 13.08	.9 / .41				.35A max.	.62A max.
LL304	10.94 / 27.88	10.19 / 25.88	1.6 / .73				.60A max.	1.00A max.
LL404	16.06 / 40.80	15.31 / 38.89	2.4 / 1.09				.80A max.	1.41A max.
LL504	21.17 / 53.78	20.42 / 51.87	3.3 / 1.50				.95A max.	1.72A max.
LL604	26.17 / 66.48	25.42 / 64.57	4.2 / 1.90				1.35A max.	2.49A max.
LL704	31.17 / 79.18	30.42 / 77.27	5.0 / 2.27				1.65A max.	2.83A max.
LL1407	66.70 / 169.32	66.55 / 169.0	11.5 / 5.22	2		18/4(1) 24/2(1)	4.00A max.	7.22A max.

*Custom sizes and configurations are available

Wiring (4 conductor, 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 Wiring	
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).

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PART NUMBER KEY											
MODEL	LENGTH ID (inches)	-	WAVELENGTH	-	DRIVER* (most common)	-	LENS	-	CABLE LENGTH	-	CONN.* (most common)
LL	XXXX	-	XXXXX	-	XXX-XXXXXX	-	XXXX	-	XXX	-	XXXX
LL	104 to 1404		W (White 6000K, Nominal) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR850 (Infrared 850nm) IR880 (Infrared 880nm) IR940 (Infrared 940nm) UV395 (UV Long 395nm)		24CV 24-ILZ 24-ILD U ¹		LL (long lens) Select or leave blank for standard lens		5M 10M Length can be customized: ex.7M=7meters Select or leave blank for 3 meters		M12D ^{1 2} BC ^{1 3} Select or leave blank for flying leads
Example 1: LL404-W-24CV-M12D Example 2: LL1104-R-24-ILZ-LL					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						

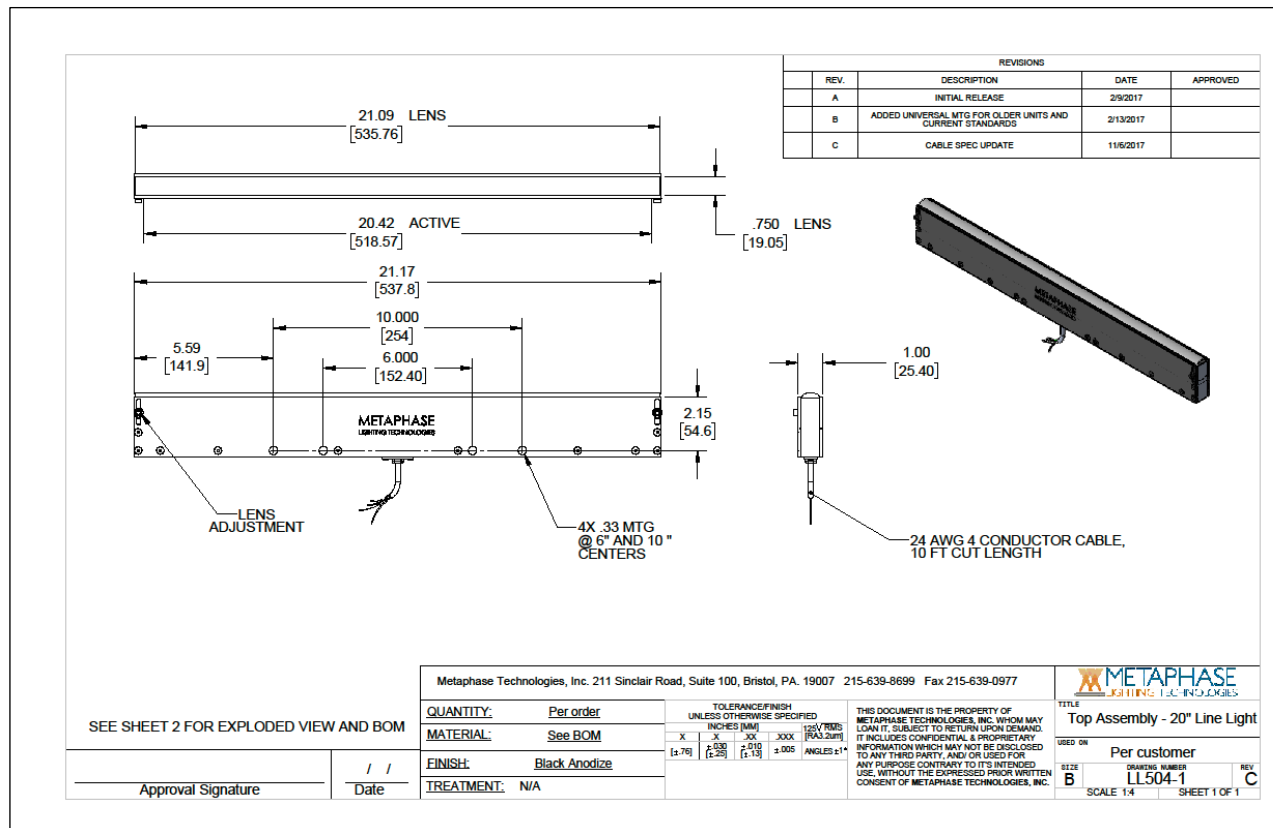
When ordering the Backlight version diffuser, add a B designator before LL. Example: BLL206-W-24CV

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: **LL504-W-24CV**



COMPLIANCE



CONTACT US

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