

MB-RL

The Metaphase near axial Ring Lights offer high intensity, shadow-less illumination with five times the lifetime over fluorescents. The MetaBright™ near axial Ring Lights are built with high density LEDs that create bright illumination of surfaces for a wide spectrum of inspection purposes.

These Ring Lights are specially designed to project an even 360° overlapping ring of light from camera to lens. In most front lighting applications, the near axial Ring Light is a simple, low cost solution to camera lighting.

The near axial Ring Light is machined from a solid block of 6061-T6 aluminum and employs Metaphase's proprietary thermal management technology to dissipate internal die temperature.



FEATURES

- Homogenous light output that provides high intensity ON-axis illumination
- Rugged design with thermally potted LEDs
- LED thermal management for stable performance
- Ideal for solder joint and electronic component inspection
- Flicker free performance and instant start up with Metaphase analog driver technology
- An ideal light with many applications including, label Identification, part markings, surface inspection etc.
- Built-in Constant Current Driver with 0 – 10VDC intensity control, compatible with DDC-3 and ILD-35 Dimmers

WAVELENGTHS

Order ID	Description / nanometers
W	White (6000K), Nominal
R	Red / 630nm
G	Green / 530nm
B	Blue / 470nm
IR850	Infrared / 850nm
IR940	Infrared / 940nm
UV365	Ultraviolet Short / 365nm
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)



945 East 11th Avenue Tampa, FL 33605

Phone: (813) 984-0125

Contact: Sales@pyramidimaging.com

<https://pyramidimaging.com>

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MetaBright RING LIGHTS							
MODEL*	Inside Diameter Inches (cm)	Outside Diameter Inches (cm)	Weight lbs (grams)	Cable QTY	Cable Length	Cable Description	Maximum Input Current @24VDC
MB-RL101	1.0 (2.5)	3.0 (7.6)	.31 (146)	1	10ft	24 AWG 4 Wire	0.3A
MB-RL201	2.0 (5.1)	4.0 (10.2)	.77 (350)				0.6A
MB-RL201M46	1.61 (4.1)	5.77 (14.66)	1.2 (544)				0.75A
MB-RL207	2.0 (5.1)	5.15 (13.09)	.83 (376)				0.75A
MB-RL301	2.56 (6.51)	5.74 (14.58)	.92 (417)				0.75A
MB-RL307 (IP69K)	2.56 (6.51)	5.79 (14.71)	1.0 (455)	12 pos bulkhead conn.			
MB-RL20001	7.874 (20.0)	11.563 (29.37)		1	10ft	24 AWG 4 Wire	
MB-RL23001	9.055 (23.0)	12.744 (32.37)					
MB-RL30001	11.811 (30.0)	15.500 (39.37)					

*Custom sizes and configurations available

Wiring (4 conductors, flying leads)**	
Wire Color	Function
RED	+24VDC
WHITE	0-10VDC INTENSITY CONTROL
BLACK	GROUND (24V RTN)
GREEN	SIGNAL GROUND

Wiring (4 conductors, without Intensity Control)	
Wire Color	Function
RED	+24VDC
WHITE	+24VDC
BLACK	GROUND (24V RTN)
GREEN	GROUND (24V RTN)

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	
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).

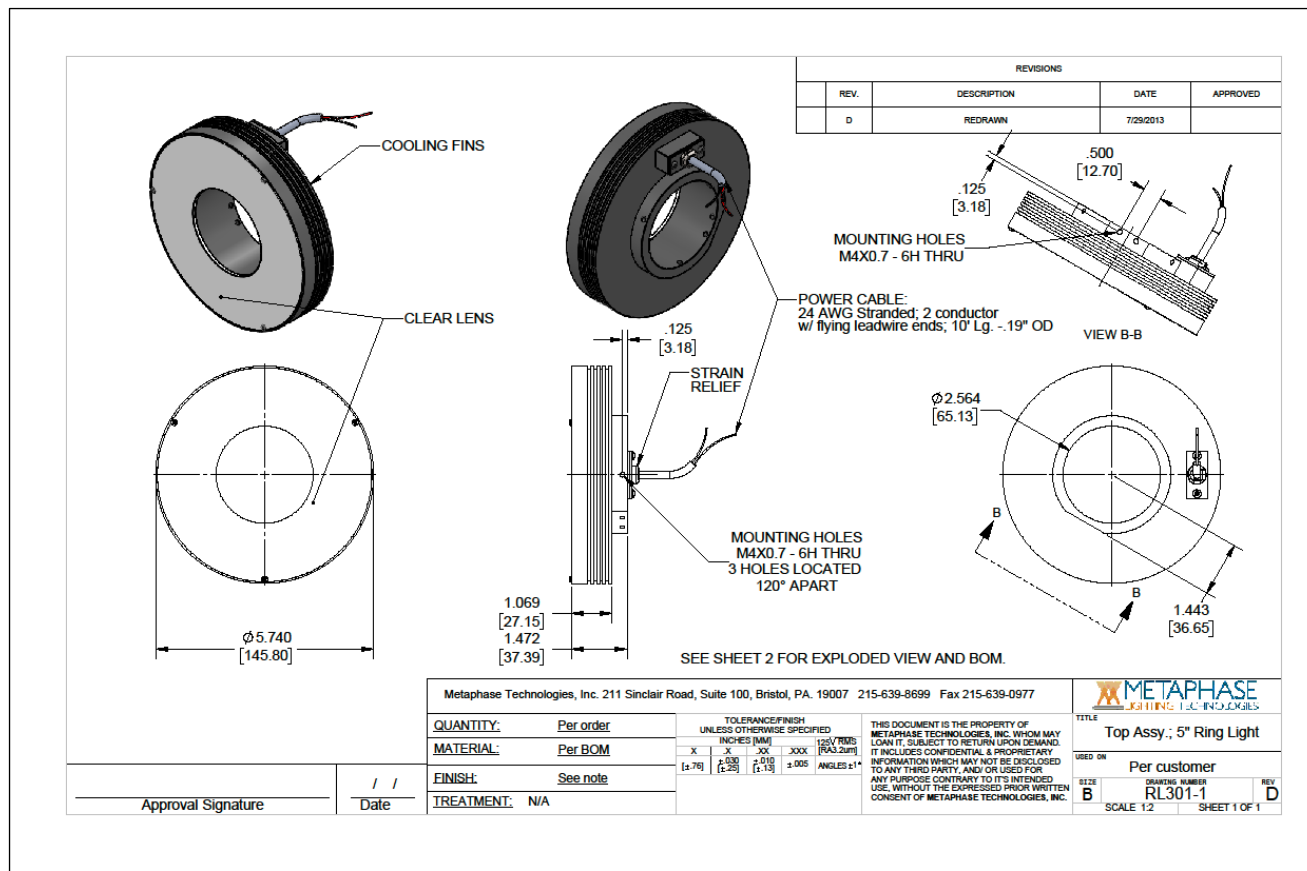
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PART NUMBER KEY													
MODEL	SIZE ID/OD	-	WAVELENGTH	-	DRIVER* (most common)	-	POLARIZER	-	DIFFUSER	-	CABLE LENGTH	-	CONN.** (most Common)
MB-RL	XXX	-	XXXXX	-	XXXXX	-	XXX	-	XX	-	XXX	-	XXXX
MB-RL	101 (1.0"/3.0") 201 (2.0"/4.0") 201M46 (1.6"/5.77") 207 (2.0"/5.15") 301 (2.5"/5.74") 307 (2.56"/5.79") 20001 (200mm/294mm) 23001 (230mm/324mm) 30001 (300mm/394mm)		W (White 6000K, Nominal) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR850 (Infrared 850nm) IR940 (Infrared 940nm) UV365 (UV Short 365nm) UV395 (UV Long 395nm)		24Z 24-ILSXXX 24-ILD U¹		POLO (0°)		CC (Clear Cover) D2 (Single Matte) D3 (TIR/SLK) D4 (Milky White) D5 (Double Matte)		5M 10M Length can be customized: ex.7M=7meters		M12D^{1 2} BC^{1 3}
			RGB (Red-Blue-Green)		24-ILD3		Select or leave blank for no polarizer		Select one		Select or leave blank for 3 meters		Select or leave blank for flying leads
			Example 1: MB-RL201-W-24Z-D2 Example 2: MB-RL23001-UV395-24Z-CC							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.

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Sample Model Number: **MB-RL301-W-24Z-D2**945 East 11th Avenue Tampa, FL 33605

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COMPLIANCE



CONTACT US

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