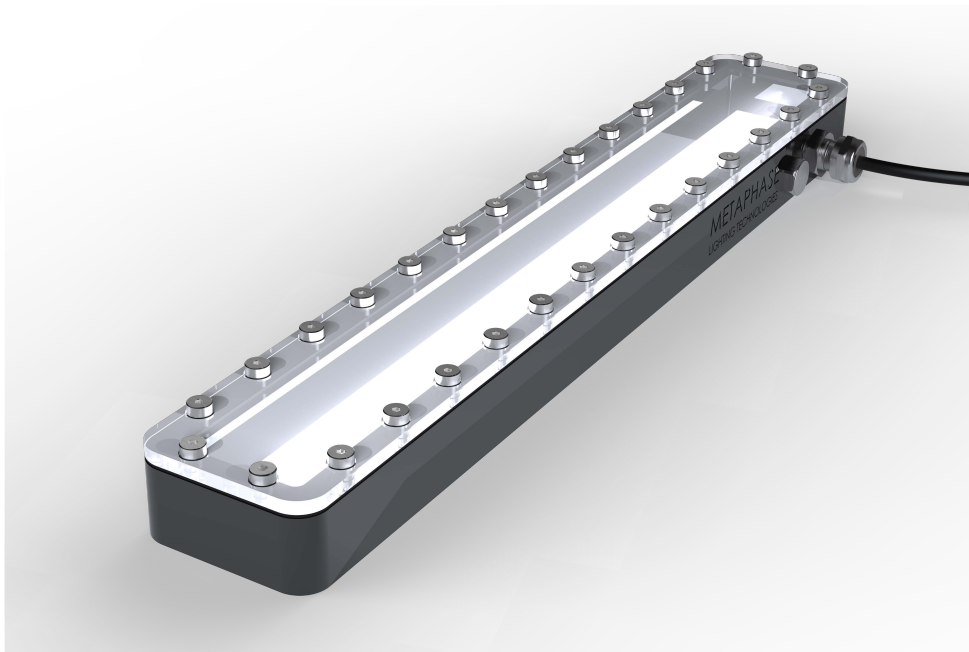


RBL Bar Lights

Advanced IP-rated Protection!



The New RBL Series Bar Lights

The latest edition of the RBL Robolight series comes in Aluminum or Stainless Steel, with both versions carrying a standard IP-69K washdown rating. This indicates the RBL is completely dust-proof and able to endure high-pressure water spray from all directions. This light will hold up to the harshest of environments, while maintaining all the features, control, and wavelengths, you expect from Metaphase.

- ◆ Aluminum or Stainless Steel
- ◆ IP69K ingress protection on all models
- ◆ Various lensing and diffuser options to choose from
- ◆ High-uniformity and brightness
- ◆ Multispectral and Hyperspectral options

Features

- Visible, UV, IR, SWIR, Single-Color, Multispectral, Hyperspectral (with individual dimming)
- Smart driver with continuous DC and follow-me strobe 8x overdrive
- Various lensing, diffuser, polarizer, wavelength, size, and connection types available

RBL Part Numbers and Sizes



RBL

TABLE 1: PART NUMBER KEY

Contact your Metaphase Sales representative for custom versions (intensity, uniformity, wavelengths, sizes, etc).

Family	Model	Length	Color	Diffuser	Lens	Connector*
RBL	XX	XX	XXXXX	XXX	XX	XXX
	1A - Aluminum, ULC-compatible	List number of 25mm segments.	W (White, 5700K)	CC00 - clear cover	L12 (full angle)	M12A
	1B - Aluminum, internal driver w/ dimming	Available in 150mm increments,	R (Red 630nm)	CC06 - clear cover w/ 1X30 diffuser	L16 (full angle)	M12T
	1C - Aluminum, continuous w/ pulse follow strobe	ie: 6, 12, 18, 24, etc.	G (Green 530nm)		B (Blue 470nm)	
	2A - Stainless, ULC-compatible		RGB (Red Green Blue)	D500 - clear cover w/ single matte opal rep diff.	L50 (full angle)	
	2B - Stainless, internal driver w/ dimming		UV395			
	2C - Stainless, continuous w/ pulse follow strobe		UV365			
			IR850			
			IR940			
			IR05			
			IR20			
			IR30			
			IR45			
			IR55			
			IR65			

*NOTE - Connection option availability may depend on length and/or model selected

ULC-Version (A/U VERSION)

ULC-2	UNIVERSAL LED CONTROLLER, TWO-CHANNEL, WITH ULC-2 CONNECTORS <i>Note: Requires 24VDC power supply, 6.7 A, to run at full capability</i>
CAB-FM12TU-3M (1 channel)	3 METER EXTENSION CABLE, FEMALE, M12, T-CODE, 4-PIN TO ONE ULC CONNECTOR, LED POS ON PIN 1 & 2, LED NEG ON PINS 3 & 4
CAB-FM12T2U-3M (2 Channel)	3 METER EXTENSION CABLE, FEMALE, M12, T-CODE, 4-PIN TO TWO ULC CONNECTORS, LED POS CHAN A & B ON PINS 1 & 2; LED NEG CHAN A & B ON PINS 3 & 4

DC WITH STROBE (C VERSION)

CAB-FM12FL-3M	3 METER EXTENSION CABLE, PUR FEMALE M12 A-CODE 5-PIN TO FLYING LEADS
CAB-FM12FL-5M	5 METER EXTENSION CABLE, PUR FEMALE M12 A-CODE 5-PIN TO FLYING LEADS
CAB-FM12FL-10M	10 METER EXTENSION CABLE, PUR FEMALE M12 A-CODE 5-PIN TO FLYING LEADS
CAB-FM12FL-15M	15 METER EXTENSION CABLE, PUR FEMALE M12 A-CODE 5-PIN TO FLYING LEADS



General	
Operating Temperature:	0-40°C, 90% RH, non-condensing
Storage Temperature:	0-70°C, 90% RH, non-condensing
Compliance:	RoHs, CE, IEC 62471
Photobiological Risk Factor:	RISK GROUP 1 455, 530, 625, 850, W
Electrical	
Input Power:	24VDC+/-5%
0-10V Dimming Control:	Off: 0V Turn-on Threshold: 0.95V 100% Intensity: 10V Max Allowance Voltage: 24V Input Impedance: 14kΩ
Trigger Input (5 KHz Max. Trigger Rate)*:	PNP Voltage Enable > 2.4V NPN Voltage Enable < 0.9V Min Trigger Pulse: 10 μs Trigger Turn-on Delay: 10 μs Trigger Turn-off Delay: 20 μs Input Impedance: 14kΩ
<i>*Note: Information above only applies to units designated with a trigger.</i>	
Overdrive:	Output: 8x Pulse Width: < 2ms Duty Cycle: < 10%

Light Operation (1C versions):

Continuous Mode: The light will illuminate, at full intensity, when 24VDC is applied to the +24V line, 10-24VDC is applied to the 0-10V dimming line, and a continuous voltage > 2.4VDC (up to 24V max) is applied to the trigger line.

The light can be dimmed by proportionally applying a voltage less than 10VDC to the 0-10VDC intensity control while the trigger input requirements are satisfied. User can toggle the light ON/OFF at DC level by turning ON/OFF the 0-10VDC control line.

Strobe operation: Trigger input line uses a “follow me trigger” design where the light will strobe at 8x overdrive* intensity when a pulse is applied to the trigger input for a duration between 2.5us and 2ms, with a duty cycle less than 10%. For trigger pulses that have a duration longer than 2 ms, and/or duty cycle higher than 10%, the light will continue to strobe at 1X intensity (which is equivalent to continuous mode intensity). Strobe mode* also uses 0-10VDC control line where the light will be at FULL intensity when any voltage from 10-24VDC is applied to this control line and proportionally dimmer for voltages less than 10VDC.

**Note 1: 4x overdrive available when PCB without lenses is used, 8x available when PCB with lenses is used.*

**Note 2: 4x overdrive only available with dimming capability.*



RBL1 = ALUMINUM RBL2 = STAINLESS STEEL

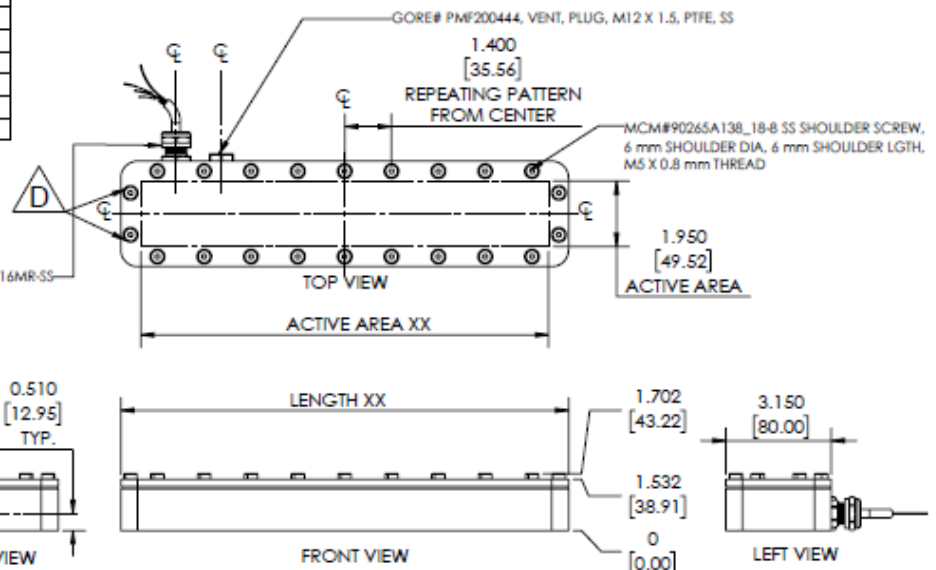
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	8/26/2024	LES
B	STRAIN RELIEF PART CHANGE	9/11/2024	LES
C	LENGTH, WIDTH SIZE CHANGE	9/25/2024	LES
D	2 SHOULDER SCREWS ADDED TO EACH END	10/11/2024	LES

LIGHT	ACTIVE AREA XX INCHES	ACTIVE AREA XX mm	LENGTH XX INCHES	LENGTH XX mm
RBL1-06-IP69K	6.280	159.5	7.480	190
RBL1-12-IP69K	12.186	309.5	13.386	340
RBL1-18-IP69K	18.091	459.5	19.291	490
RBL1-24-IP69K	23.997	609.5	25.197	640
RBL1-30-IP69K	29.902	759.5	31.102	790
RBL1-36-IP69K	35.808	909.5	37.008	940
RBL1-42-IP69K	41.713	1059.5	42.913	1090
RBL1-48-IP69K	47.619	1209.5	48.819	1240
RBL1-54-IP69K	53.524	1359.5	54.724	1390
RBL1-60-IP69K	59.430	1509.5	60.630	1540
RBL1-66-IP69K	65.335	1659.5	66.535	1690
RBL1-72-IP69K	71.241	1809.5	72.441	1840

RBL1 SHOWN ONLY
RBL1 & RBL2 SPECIFICATION ARE THE SAME

B STRAIN RELIEF, CORD GRIP, M16X1.5
.12-28/OD CORD, SS SEALCON# CD16MR-SS

POWER & BREATHER LOCATION ON REAR OF LIGHT



MATERIAL FINISH:
RBL1 - ALUMINUM (BLACK ANODIZED)
RBL2 - STAINLESS STEEL (PASSIVATE)

Metaphase Technologies, Inc. 200 Rittenhouse Circle, Unit 7, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977



QUANTITY:	PER ORDER
MATERIAL:	ALUMINUM OR STAINLESS STEEL
FINISH:	SEE NOTE
TREATMENT:	N/A

TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED			
INCHES (MM)		125V RMS (RMS 2um)	
X	.XX	.XXX	
(±.7%)	(±.25)	(±.010)	(±.005)
ANGLES ±1°			

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TITLE		TOP LEVEL ASSY, ROBOTLIGHT	
USED ON		PER CUSTOMER	
SIZE	DRAWING NUMBER	REV	
B	RBL1-XX-IP69K	D	
SCALE 1:3		SHEET 1 OF 4	

Approval Signature _____ Date / /



For nearly two decades, Metaphase Technologies has been developing products that implement “The Quality of Light” through engineering and manufacture of cutting-edge LED illuminators for machine vision, military, and specialty lighting applications.

We're proud of our demonstrated expertise engineering flexible lighting solutions that have facilitated integration into thousands of vision systems designs.

Throughout the world, Metaphase clients enjoy the enhanced automation and image capture benefits of our patent-pending breakthroughs in uniform diffuse high brightness and ultra-brightness LED illumination.

First to implement built-in constant current drivers across multiple product lines, Metaphase continues to synergize cutting-edge LED lighting & control technologies that streamline innovation and increases return on investment.

Made in the USA for nearly 30 years, our versatile designs are continuously updated to incorporate the latest advances in LEDs, thermal management, optics, and electronic technologies to meet the challenging needs of today's global automation and scientific marketplace.

Contact us to see how Metaphase can help with your cutting-edge lighting needs.



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