

MB-RBL

Metabright™ Robolights provide high intensity direct illumination comparable to Metabright™ Front Lights and are designed for IP68 rated environments with an optional IP69K version available for all model sizes. Robolights feature rugged housings for industrial work envelopes. The Robolight is a cost effective and an “integrator ready” machine vision illuminator with an integrated constant current driver that includes 0-10V intensity control.



FEATURES

- The 24V version has a Built-in Constant Current Driver with 0-10VDC Intensity Control
- Passive cooling (no fans needed)
- Rugged housings for industrial work envelopes
 - IP68 Black Anodized Aluminum
 - IP68 Stainless Steel
- IP69K version available
- Stainless Steel version meets Food and Drug Administration (FDA) requirements
- Compatible with DDC-3 and ILD-35

APPLICATIONS

- Machine Vision and Automation
- Work bench illumination
- Automotive component inspection
- Coiled steel pin-hole detection
- Pick and Place applications
- Harsh environments
- Sorting facilities
- Robotic inspection
- Liquid filling

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

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)

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SINGLE COLOR ROBLIGHTS							Typical Current (Amps) @24VDC					
All models: Overall W=2.5", Active area W=1.5"												
MODEL	Overall Length inches (cm)	Active Area Length Inches (cm)	Weight lbs/Kg	Weight lbs/Kg	Cable	WHT	RED	GRN	BLUE	IR	UVL	
MB-RBL205	6.73 (17.08)	5.73 (14.54)	1.2 / 0.54	2.9 / 1.32	20 AWG 4-Wire 10ft	0.3	0.2	0.3	0.3	0.3	0.2	
MB-RBL285	8.00 (20.32)	7.00 (17.78)	1.4 / 0.63	3.0 / 1.36		0.3	0.2	0.3	0.3	0.3	0.2	
MB-RBL305	12.50 (31.75)	11.50 (29.21)	2.2 / 1.00	5.1 / 2.31		0.6	0.4	0.6	0.6	0.5	0.5	
MB-RBL365	16.00 (40.64)	15.00 (38.10)	2.8 / 1.27	6.0 / 2.72		0.8	0.5	0.8	0.7	0.8	0.7	
MB-RBL385	18.00 (45.72)	17.00 (43.18)	3.2 / 1.45	6.8 / 3.08		0.8	0.6	0.8	0.7	0.8	0.7	
MB-RBL405	24.00 (60.96)	23.00 (58.42)	4.2 / 1.90	9.0 / 4.08		0.9	0.7	0.9	0.8	0.8	0.8	
MB-RBL505	30.00 (76.20)	29.00 (73.66)	5.3 / 2.40	11.2 / 5.08	18 AWG 4-Wire 10ft	1.3	1.0	1.4	1.3	1.1	1.2	
MB-RBL605	36.00 (91.44)	35.00 (88.90)	6.5 / 2.95	13.5 / 6.12		1.5	1.2	1.6	1.5	1.5	1.4	
MB-RBL705	42.00 (106.68)	41.00 (104.14)	7.6 / 3.45	15.8 / 7.17		1.7	1.4	1.8	1.7	1.7	1.6	
MB-RBL805	48.00 (121.92)	47.00 (119.80)	8.7 / 3.95	18.0 / 8.16		2.0	1.8	2.1	2.1	2.0	2.0	
MB-RBL905	54.00 (137.16)	53.00 (134.62)	10.0 / 4.54	20.3 / 9.21		2.2	1.9	2.2	2.2	2.2	2.1	
MB-RBL1005	60.00 (152.40)	59.00 (149.96)	11.1 / 5.03	22.5 / 9.98		2.5	2.1	2.7	2.6	2.5	2.3	
MB-RBL1105	66.00 (167.64)	65.00 (165.10)	12.3 / 5.58	24.8 / 11.25		2.8	2.4	2.8	2.8	2.7	2.6	
MB-RBL1205	72.00 (182.88)	71.00 (180.34)	13.5 / 6.12	27.0 / 12.25		3.0	2.7	3.2	3.1	2.9	2.8	
			Aluminum	Stainless Steel								

*Custom sizes and configurations are available

WIRING DIAGRAM (4 conductor)		WIRING DIAGRAM (6 conductor)		M12 (5 position male)	
Wire Color	Function	Wire Color	Function	Pin #	Function
RED	+24VDC	RED, ORANGE	+24VDC	1	+24VDC
GREEN	SIGNAL GROUND	GREEN	SIGNAL GROUND	2	0-10VDC Intensity Control
BLACK	GROUND (24V RTN)	BLACK, BLUE	GROUND (24V RTN)	3	GROUND (24V RTN)
WHITE	0-10VDC Intensity Control	WHITE	0-10VDC Intensity Control	4	SIGNAL GROUND
				5	No Connection
When not using the Intensity Control, connect the 0-10V control line to the +24VDC and connect the Signal Ground to Ground (24V RTN)				The M12 connector option is not recommended for lights rated more than 4 amps	

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	-	WAVELENGTH	-	DRIVER* (most common)	-	POLARIZER	-	LENS	-	MATERIAL	-	CABLE LENGTH	-	CONN.** (most Common)
MB-RBL	XXX	-	XXXXX	-	XXX-XXXXXX	-	XXXX	-	XXX	-	XX	-	XXX	-	XXXX
MB-RBL	205 to 1205		W (White 6000K, Nominal) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR850 (Infrared 850nm) IR940 (Infrared 940nm) UV395 (UV Long 395nm) RGB (Red-Green-Blue)		24Z 24Z-TRG 24-ILSXXX 24-BISXXX 24-ILD U¹		POLO		D1 (no lens) L30 (±15°) L11 (±5.5°)		SS (Stainless Steel)		5M 10M Length can be customized: ex.7M=7meters		M12D^{1 2} BC^{1 3}
Example 1: MB-RBL365-W-24Z-L30-SS-M12D Example 2: MB-RBL805-B-24-ILD-D1-BC										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 Part Number: **MB-RBL385-W-24Z-D1**

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	2/4/2015	
B	REMOVED GASKET ADHESIVE NOTE	2/18/2016	

18.00 OVERALL [457.20]
17.00 LIGHTED AREA [431.80]
.50 [12.70]
2.50 [63.50]
1.50 [38.10] LIGHTED AREA
2.88 [73.03]
CLEAR ACRYLIC LENS
POWER CABLE
Gore High Flex
20 AWG Shielded Power Cable: 4 conductor w/ flying leadwire ends; Ø .19" 10' Lg. W/ water resistant grommet.
SEE SHEET 2 FOR EXPLODED VIEW AND BOM.
SEE SHEET 3 FOR MOUNTING HOLES
1.41 [35.79]
1.26 [32.09]
.49 [12.45]
STAINLESS STEEL HARDWARE
COOLING FINS ON BOTH SIDES
WATER RESISTANT GASKET

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QUANTITY:	Per order	TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED	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.; RoBo Light- 18"
MATERIAL:	Aluminum, plastic	X .X .XX .XXX [R&S.2UM] 120V RMS [R&S.2UM] 2.000 [1.13] 2.005 ANGLES ±1°		USED ON	Per customer
FINISH:	Black Anodized			SIZE	B
TREATMENT:	N/A			DRAWING NUMBER	MB-RBL-385-1
Approval Signature	Date			SCALE	1:4
				SHEET	1 OF 3

COMPLIANCE



CONTACT US

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