

MB-LFL

Metaphase Linear Front Lights feature high density LED array placement and proprietary *Metaphase* thermal management technology to assure maximum LED lifetime and lowest cost of ownership. Our Front Lights are designed for longer working distances and feature rugged housings such as those found in industrial robotics work envelopes. Our Linear Front Lights are available in MetaLight (LFL) and high power MetaBright™ (MB-LFL) versions.



FEATURES

- Homogenous light output that provides high intensity illumination
- Shock and vibration resistant
- LED thermal management for stable performance
- Industry proven for virtually any lighting application
- Flicker free performance and instant start up with Metaphase analog driver technology
- Economical, low cost
- An ideal light for many applications
- Available in MetaLight (LFL) without intensity control and in high power MetaBright™ (MB-LFL) versions
- MetaBright™ (MB-LFL) versions have a 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
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)

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MetaBright™ Linear Front Lights							
MODEL	Dimensions W x L x H Inches (cm)	Active Area W x L Inches (cm)	Weight lbs (grams)	Cable QTY	Cable Length	Cable AWG/ Conductors	Max Input Current @24VDC
MB-LFL1x4	.87 x 4.33 x .98 (2.21 x 11.0 x 2.49)	.63 x 4.11 (1.6 x 10.44)	.32 (145)	1	10ft	24/4	.20A
MB-LFL1x6	.87 x 6.63 x .98 (2.21 x 16.3 x 2.49)	.67 x 6.43 (1.70 x 16.32)	.42 (191)				.24A
MB-LFL205	1.25 x 6.05 x 1.13 (3.18 x 15.4 x 2.86)	1.0 x 5.65 (2.54 x 14.35)	.56 (253)				.30A
MB-LFL305	1.25 x 11.3 x 1.13 (3.18 x 28.7 x 2.86)	1.18 x 11.0 (2.98 x 27.9)	1.0 (467)				.45A
MB-LFL405	1.25 x 16.3 x 1.13 (3.18 x 41.4 x 2.86)	1.18 x 16.0 (2.98 x 40.6)	1.2 (561)				.62A
MB-LFL505	1.25 x 21.0 x 1.13 (3.18 x 53.5 x 2.86)	1.16 x 20.65 (2.95 x 52.4)	1.4 (626)				.75A
MB-LFL605	1.25 x 26.32 x 1.13 (3.18 x 66.8 x 2.86)	1.18 x 26.0 (2.98 x 66.0)	1.6 (740)				.86A
Inquire about larger sizes listed below							
MB-LFL705							
MB-LFL805							
MB-LFL905							
MB-LFL1005							
MB-LFL1105							
MB-LFL1205							
MB-LFL1305							
MB-LFL1405							

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Wiring (4 conductor with Intensity Control)**	
Wire Color	Function
RED	+24VDC
WHITE	0-10VDC INTENSITY CONTROL
BLACK	GROUND (24V RTN)
GREEN	SIGNAL GROUND

Wiring (4 conductor 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	-	WAVELENGTH	-	DRIVER* (most common)	-	DIFFUSER	-	CABLE LENGTH	-	CONN.** (most Common)
MB-LFL	XXX	-	XXXXXX	-	XXXXXX	-	XX	-	XXX	-	XXXX
MB-LFL	1x4 1x6 205 305 405 505 605 705 805 905 1005 1105 1205 1305 1405		W (White 6000K, Nominal) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR850 (Infrared 850nm) UV365 (UV Short 365nm) UV395 (UV Long 395nm) RGB		24Z 24-ILZ 24-ILD U ¹		CC (Clear Cover) D2 (Single Matte) D3 (TIR/SLK) D4 (Milky White) D5 (Double Matte)		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: MB-LFL1x6-G-24Z-D2 Example 2: MB-LFL1005-UV395-24-ILD-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.

*(Link to Driver Options Key)

** (Link to Connector Key)

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Sample Part Number: **MB-LFL301-W-24Z-D3**

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	4/5/2016	

LENS-OPTIONS INCLUDE:
Option1: TIR Material
Option2: P95 Single Side Matte Material
Option3: Clear Cast Acrylic Material

1.18 LENS [29.85]
11.00 LENS [279.40]
11.30 [287.02]

1.13 [28.58]
BLACK ANODIZED HOUSING
5.65 [143.51]
POWER CABLE

0.36 [9.14]
1.13 [28.58]
1.25 [31.75]
52 [13.21]
56 [14.22]

∅ .13 [3.30] ∓ .33 [8.26]
#M4X0.7 ∓ .25 [6.35]
2 HOLES NEAR SIDE
2 HOLE FAR SIDE

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SEE SHEET 2 FOR EXPLODED VIEW AND BOM.

QUANTITY:	Per order	TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED	THIS DOCUMENT IS THE PROPERTY OF METAPHASE TECHNOLOGIES, INC. WHO 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 Assembly, 1" x 10" Light
MATERIAL:	Aluminum/ Plastic	INCHES (MM)		USED ON	Per customer
FINISH:	Black anodize	1000 (25.4)		SIZE	B
TREATMENT:	N/A	1.000 (25.4)		DRAWING NUMBER	LFL301-1

Approval Signature _____ Date / /

SCALE 1:4 SHEET 1 OF 1

COMPLIANCE



CONTACT US

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