

MB-LBL

The MetaBright™ Linear Backlight provides uniform lighting ($\pm 5\%$) using High Density Precision Chip Technology (HDPCT) with the super bright LEDs.



FEATURES

- High density LED array provides maximum intensity area within $\pm 5\%$
- High aspect ratio backlight
- Flicker free performance and instant start up with Metaphase analog driver technology
- Available in multiple versions including continuous, in-line strobe (ILS), current controlled (ULC-2), etc.
- Flicker free performance and instant start up with Metaphase analog driver technology
- Optional Constant Current driver with 0-10VDC intensity control (Z option)

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

GENERAL SPECIFICATIONS

Power Source:	24VDC $\pm 5\%$
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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LINEAR BACKLIGHTS							
MODEL	All models: H = .71 inches (1.8cm) Width and Length Inches (cm)	Active Area Inches (cm)	Weight lbs / grams	Cable QTY	Cable Length	Cable Description	Maximum Input Current @24VDC
MB-LBL201	2.50 x 8.22 (6.35 x 20.88)	1.20 x 6.00 (3.05 x 15.24)	.63 / 286	1	10ft	24 AWG 4 Conductor	0.40 amps
MB-LBL211	2.50 x 8.80 (6.35 x 22.35)	1.20 x 8.00 (3.05 x 20.32)	1.0 / 454				0.45 amps
MB-LBL311	2.50 x 14.25 (6.35 x 36.20)	1.20 x 13.00 (3.05 x 33.02)	1.2 / 544				0.60 amps

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	-	WAVELENGTH	-	DRIVER* (most common)	-	CABLE LENGTH	-	CONN.** (most common)
MB-LBL	XXX	-	XXXXX	-	XXXXXXXX	-	XXX	-	XXXX
MB-LBL	201 211 311 76x279 (mm)		W (White 6000K, Nominal) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR850 (Infrared 850nm) IR940 (Infrared 940nm) UV395 (UV Long 395nm)		24CV 24Z 24-ILZ 24-ILSXXX 24-ILD U¹		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-LBL201-G-24CV Example 2: MB-LBL311-R-24Z-M12D					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 / **Connector Options Key](#)

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Sample Model Number: **MB-LBL201-W-24Z**

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	5/12/2016	

24 awg stranded 4 conductor cable
10' long, with flying lead ends
(includes strain relief and mounting plate)

(4) MOUNTING HOLES
M5X0.8 - 6mm DP.

<p>Metaphase Technologies, Inc. 211 Sinclair Road, Suite 100, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">QUANTITY:</td> <td>Per order</td> </tr> <tr> <td>MATERIAL:</td> <td>Aluminum/ Acrylic</td> </tr> <tr> <td>FINISH:</td> <td>Black Anodize</td> </tr> <tr> <td>TREATMENT:</td> <td>N/A</td> </tr> </table>	QUANTITY:	Per order	MATERIAL:	Aluminum/ Acrylic	FINISH:	Black Anodize	TREATMENT:	N/A	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">TOLERANCE / FINISH UNLESS OTHERWISE SPECIFIED</th> </tr> <tr> <td style="text-align: center;">INCHES</td> <td style="text-align: center;">MM</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">[±.75]</td> <td style="text-align: center;">[±.25]</td> </tr> <tr> <td style="text-align: center;">XX</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">XXX</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">[±.15]</td> <td style="text-align: center;">[±.15]</td> </tr> <tr> <td style="text-align: center;">±.005</td> <td style="text-align: center;">±.005</td> </tr> <tr> <td colspan="2" style="text-align: center;">ANGLES ±1°</td> </tr> </table> <p>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.</p>	TOLERANCE / FINISH UNLESS OTHERWISE SPECIFIED		INCHES	MM	X	X	[±.75]	[±.25]	XX	X	XXX	X	[±.15]	[±.15]	±.005	±.005	ANGLES ±1°	
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Approval Signature	/ / Date		
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TITLE	Linear Back Light
USED ON	Per customer
SIZE	B
DRAWING NUMBER	LBL201
SCALE	1:2
REV	A
SHEET 1 OF 1	

COMPLIANCE



CONTACT US

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