

**MB-LE110**

The MetaBright™ LED Light Engine was designed for direct fiber coupling of up to 8mm fiber bundles and features advanced optical and thermal control technology as well as a built-in 24-volt constant current driver in one small compact package. LED Light Engines are typically used with optical fiber ring lights and backlights.



**FEATURES**

- Low power, high intensity spotlight source
- Optional mounting bracket available
- LED thermal management for stable performance
- Through-the-camera-lens illumination
- Flicker free performance and instant start up with Metaphase analog driver technology
- Built-in Constant Current Driver with 0-10VDC intensity control, compatible with DDC-3 and ILD-35 Dimmers

**WAVELENGTHS**

Order ID	Description / nanometers
<b>W</b>	White (6000K), Nominal
<b>R</b>	Red / 630nm
<b>G</b>	Green / 530nm
<b>B</b>	Blue / 470nm
<b>IR850</b>	Infrared / 850nm
<b>IR05</b>	Infrared / 1050nm
<b>IR20</b>	Infrared / 1200nm
<b>IR30</b>	Infrared / 1300nm
<b>IR45</b>	Infrared / 1450nm
<b>IR55</b>	Infrared / 1550nm
<b>IR65</b>	Infrared / 1650nm

**GENERAL SPECIFICATIONS**

<b>Power Source:</b>	24VDC ±5%
<b>Cable (Standard):</b>	10-foot cable with flying leads
<b>Housing:</b>	Black Anodized Aluminum
<b>Ambient Temp:</b>	-20°C to 40°C
<b>Lifetime Expectancy:</b>	75,000 hours (except UV)

**MB-LE110**

LED Light Engine							
MODEL	Length Inches (mm)	Lens Diameter Inches (mm)	Weight lbs (grams)	Cable QTY	Cable Length	Cable Description	Typical Input Current
MB-LE110	2.63 (66.7)	.25 (.64)	0.7 (320)	1	10ft	24 AWG 4 conductors	<.1 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).

MB-LE110

PART NUMBER KEY								
MODEL	-	WAVELENGTH	-	DRIVER* (most common)	-	CABLE LENGTH	-	CONN.** (most common)
MB-LE110	-	XXXXX	-	XXXXXXXX	-	XXX	-	XXXX
<b>MB-LE110</b>		<b>W</b> (White 6000K, Nominal) <b>R</b> (Red 630nm) <b>G</b> (Green 530nm) <b>B</b> (Blue 470nm) <b>IR850</b> (Infrared 850nm) <b>IR05</b> (Infrared 1050nm) <b>IR20</b> (Infrared 1200nm) <b>IR30</b> (Infrared 1300nm) <b>IR45</b> (Infrared 1450nm) <b>IR55</b> (Infrared 1550nm) <b>IR65</b> (Infrared 1650nm)		<b>24Z</b> <b>24NZ</b> <b>24-ILD</b> <b>U</b> <sup>1</sup>		<b>5M</b> <b>10M</b>  Length can be customized: ex. 7M=7meters  Select or leave blank for 3 meters		<b>M12D</b> <sup>1 2</sup>  Select or leave blank for flying leads
Example 1: <b>MB-LE110-W-24Z</b>				<sup>1</sup> Not available in lights exceeding 4A input current				
Example 2: <b>MB-LE110-IR30-24-ILD</b>				<sup>2</sup> Default cable length for an M12D connector is 19 inches				

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.

**MB-LE110**

Sample Part Number: **MB-LE110-W-24Z**

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
D	REVISED RELEASE	5/27/2016	

  
  

Metaphase Technologies, Inc. 211 Sinclair Road, Suite 100, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977														
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.											
MATERIAL:	See BOM	INCHES [MM]	<table border="1" style="font-size: small;"> <tr> <td>X</td> <td>X</td> <td>XX</td> <td>XXX</td> <td>125/VRMS [5.0/200]</td> <td rowspan="2">ANGLES ±°</td> </tr> <tr> <td>[±.75]</td> <td>[±.030 [±.25]</td> <td>[±.010 [±.13]</td> <td>±.005</td> <td></td> </tr> </table>	X	X	XX	XXX	125/VRMS [5.0/200]	ANGLES ±°	[±.75]	[±.030 [±.25]	[±.010 [±.13]	±.005	
X	X	XX		XXX	125/VRMS [5.0/200]	ANGLES ±°								
[±.75]	[±.030 [±.25]	[±.010 [±.13]	±.005											
FINISH:	Black Anodize													
TREATMENT:	N/A													

  

Approval Signature	// Date	TITLE Top Assembly LE110	USED ON Per customer
		SIZE <b>B</b>	DRAWING NUMBER <b>LE110</b>
		SCALE 1:1	REV <b>D</b> SHEET 1 OF 1

## MB-LE110

### Mounting Options:

Please contact your local Metaphase representative to learn more about mounting options for the MB-LE110.

**MB-LE110 Mounting Bracket**



[COMPLIANCE](#)

[CONTACT US](#)



### **Vision Light Tech B.V.**

Protonenlaan 22, 5405 NE UDEN, P.O. Box 345, 5400 AH UDEN, The Netherlands

Phone: +31 (0)413 26 00 67, Fax +31 (0)413 26 09 38, E-mail: [inquiry@vlt.nl](mailto:inquiry@vlt.nl), Website: [www.vlt.nl](http://www.vlt.nl)

Trade register No. 17150044, VAT No. NL8112.30.946.B01