

MS-BL

Our line of MetaStandard Backlights provides a more economical option to our lineup of MetaBright Backlights for applications requiring large active areas for silhouetting or transmissive applications. These 3-inch-thick lights are available in square and rectangular forms. Utilizing a full Array LED layout provides better uniformity and intensity compared to large sized edge lit backlights. Constant current driver technology provides flicker-free performance with optional dimming control. With 30,000 Lux of intensity and $\pm 10\%$ uniformity, the MetaStandard Backlight is a leader in price and performance.



FEATURES

- Full Array LED layout for better uniformity and intensity compared to large sized edge lit backlights
- 30,000 Lux of intensity, minimal and $\pm 10\%$ uniformity
- Optional Constant Current driver with 0-10VDC intensity control
- Available in a wide variety of sizes in square and rectangular formats
- Flicker free performance and instant start up with Metaphase analog driver technology

APPLICATIONS

- Absence/presence of objects
- Defect detection in glass/plastic containers
- Printed circuit board through-hole inspection
- Bottle cap inspection
- Screw/Bolt thread inspection
- Glass sheet defect inspection
- Sorting and packaging facilities
- Medical products inspections

WAVELENGTHS

Order ID	Description / nanometers
W	White (6000K), Nominal
R	Red / 630nm
G	Green / 530nm
B	Blue / 470nm
IR850	Infrared / 850nm
IR880	Infrared / 880nm
IR940	Infrared / 940nm
RGB	Red-Green-Blue

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)

*For other IR wavelengths, see our SWIR Backlights

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MetaStandard Backlights							
MODEL*	All models: H =3.0 inches (7.625cm) Width and Length Inches (cm)	Active Area Inches (cm)	Weight lbs / Kg	Cable QTY	Cable Length	Cable Description	Maximum Input Current @24VDC
MS-BL4x4	6.24 x 6.83 (15.850 x 17.348)	4.00 x 4.00 (10.16 x 10.16)	1.54 / .700	1	10ft	24 AWG 4 Conductor	0.6 amps
MS-BL5x7	7.20 x 9.80 (18.288 x 24.867)	5.00 x 7.00 (12.70 x 17.78)	3.1 / 1.4				0.8 amps
MS-BL6x6	8.20 x 8.80 (20.828 x 22.327)	6.00 x 6.00 (15.24 x 15.24)	3.1 / 1.4				1.3 amps
MS-BL8x8	10.20 x 10.80 (25.908 x 27.407)	8.00 x 8.00 (20.32 x 20.32)	4.0 / 1.8			18 AWG 6 Conductor	2.4 amps
MS-BL10x25	15.16 x 28.41 (38.506 x 72.161)	10.00 x 25.00 (25.40 x 25.40)	7.8 / 3.5				3.3 amps
MS-BL12x12	14.64 x 14.76 (37.490 x 36.830)	12.00 x 12.00 (30.48 x 30.48)	6.0 / 2.7				3.1 amps
MS-BL14x14	16.90 x 17.70 (42.951 x 44.856)	14.00 x 14.00 (35.56 x 35.56)	6.2 / 2.8			16 AWG 6 Conductor	8.3 amps
MS-BL20x25	24.41 x 28.41 (62.001 x 72.161)	20.25 x 25.00 (51.44 x 63.50)	10.9 / 5.0				9.7 amps
MS-BL24x24	27.41 x 28.16 (69.621 x 71.526)	24.00 x 24.00 (60.96 x 60.96)	11.7 / 5.3				10.6 amps
MS-BL30x45	33.41 x 50.16 (84.86 x 127.4)	30.00 x 45.00 (76.20 x 114.3)	~25.0 / 11.5			2	12 AWG 6 Conductor and 24 AWG 12 Conductor
MS-BL36x45	39.41 x 50.16 (100.1 x 127.4)	36.00 x 45.00 (91.44 x 114.3)	~29.5 / 13.5	30.0 amps			
MS-BL1Mx1M	42.87 x 43.28 (109.9 x 108.9)	39.37 x 39.37 (100.0 x 100.0)	~28.0 / 13.0	30.0 amps			

*Custom sizes and configurations available

MS-BL

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)

Wiring (6 conductors, flying leads)**	
Wire Color	Function
RED, BROWN	+24VDC
YELLOW	SIGNAL GROUND
BLACK, BLUE	GROUND (24V RTN)
ORANGE	0-10VDC INTENSITY CONTROL

When not using Intensity Control, connect the 0-10V control line to +24VDC and connect Signal Ground to Ground (24V RTN)

Wiring (6 conductors, without Intensity Control)	
Wire Color	Function
RED	+24VDC
BROWN	+24VDC
ORANGE	+24VDC
BLACK	GROUND (24V RTN)
BLUE	GROUND (24V RTN)
YELLOW	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	LENGTH ID (inches)	-	WAVELENGTH	-	DRIVER* (most common)	-	CABLE LENGTH	-	CONN.** (most common)
MS-BL	XXXX	-	XXXXX	-	XXX-XXXXXX	-	XXX	-	XXXX
MS-BL	1x1 to 40x40	-	W (White 6000K, Nominal) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR850 (Infrared 850nm) IR880 (Infrared 880nm) IR940 (Infrared 940nm) UV395 (UV Long 395nm)	-	24Z 24Z-TRG 24-ILZ 24-ILSXXX 24-ILD U¹	-	5M 10M	-	M12D^{1 2}
			RGB (Red-Green-Blue)		24-ILZ3 24-ILD3		Length can be customized: ex.7M=7meters Select or leave blank for 3 meters		Select or leave blank for flying leads
Example 1: MS-BL4x4-W-24Z Example 2: MS-BL12x12-RGB-24-ILD3					¹ Not available in lights exceeding 4A input current ² 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.

[Link to *Driver Options Key / **Connector Options Key](#)

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Sample Model Number: **MS-BL4x4-W-24Z**

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	4/26/2017	

Metaphase Technologies, Inc. 211 Sinclair Road, Suite 100, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977																				
SEE SHEET 2 FOR EXPLODED VIEW AND BOM.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>QUANTITY:</td> <td>Per order</td> </tr> <tr> <td>MATERIAL:</td> <td>Per BOM</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:	Per BOM	FINISH:	Black Anodize	TREATMENT:	N/A	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED</td> </tr> <tr> <td style="text-align: center;">INCHES (MM)</td> <td style="text-align: center;">DECIMALS (MM)</td> </tr> <tr> <td style="text-align: center;">X ±.005 [.127]</td> <td style="text-align: center;">XX ±.010 [.254]</td> </tr> <tr> <td style="text-align: center;">XXX ±.015 [.381]</td> <td style="text-align: center;">XXXX ±.020 [.508]</td> </tr> <tr> <td colspan="2" style="text-align: center;">ANGLES ±1°</td> </tr> </table> <p style="font-size: small;">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)	DECIMALS (MM)	X ±.005 [.127]	XX ±.010 [.254]	XXX ±.015 [.381]	XXXX ±.020 [.508]	ANGLES ±1°	
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COMPLIANCE



CONTACT US

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