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 ±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 ±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

*For other IR wavelengths, see our SWIR Backlights

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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METAPHASE
215-639-8699

MS-BL

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	24.0 amps
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

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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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MetaStandard Backlights

PRODUCT DATA SHEET

METAPHASE LIGHTING TECHNOLOGIES

MS-BL

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) **RGB** (Red-Green-Blue)		**24Z** **24Z-TRG** **24-ILZ** **24-ILSXXX** **24-ILD** **U**[1] **24-ILZ3** **24-ILD3** XXX=rate in µs Example: 250		**5M** **10M** Length can be customized: ex.7M=7meters Select or leave blank for 3 meters		**M12D**[1][2] 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.
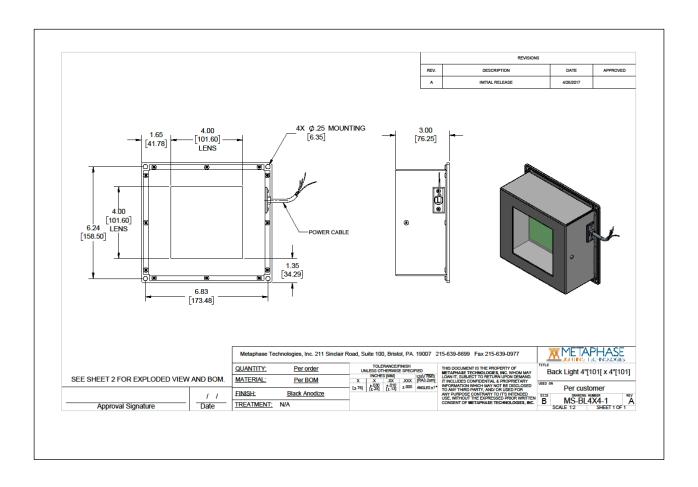
Link to *Driver Options Key / **Connector Options Key

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