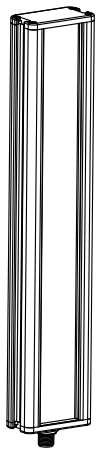
High-Power Unsealed Linear Backlights

Datasheet

Lighting for use with Vision Systems



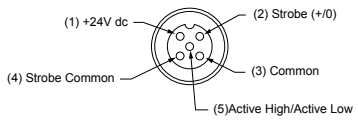
- Four high-intensity, visible wavelengths, plus IR
- The following array lengths are available:
  - 145 mm (5.7 in)
  - 290 mm (11.4 in)
  - 435 mm (17.7 in)
  - 580 mm (22.8 in)
  - 870 mm (34.2 in)
  - 1160 mm (45.6 in)
- High-power, solid-state LED array; continuous or strobed operation is selectable via sensor software (P4 models) or via hookup
- Optically isolated strobe signal
- Selectable Active High or Active Low strobe option
- Maintenance-free, rugged construction
- Built-in constant current regulation
- Very even light pattern
- Can also be used as a highly diffused area light
- Diffused backlight for any Vision System

Important: Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los High-Power Unsealed Linear Backlights, disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

Model Key

Light Source	LED Color	Linear Array	Array Length	Housing	Window Material	Relative Intensity	Intensity Control	Connector
LED	R	LB	145	X	W	6-	X	Q
	R = Red W = White B = Blue G = Green I = IR		145 mm (5.7 in) 290 mm (11.4 in) 435 mm (17.7 in) 580 mm (22.8 in) 870 mm (34.2 in) 1160 mm (45.6 in)	X = IP50	W = White Plastic		X = Not Adjustable	Q = QD

Wiring

Wire Purpose	Cable Wire Color[1]	Wire Connections	*Presence*PLUS® Pro Controller Terminal Block
Power Wires	Brown (1)	+24 V DC	Pin 01[2]
	Blue (3)	common	Pin 02
Strobe Polarity Control	Gray (5)	**Active Low:** open	Pin 02 or open
		Active High: connect to common (Blue wire)	
Strobe Voltage Wires	White (2)	**Active Low:** 0 V DC = ON +5 V DC to 24 V DC = OFF	Pin 04
		Active High: 0 V DC = OFF +5 V DC to 24 V DC = ON	
	Black (4)	Strobe common	Pin 02
		 *Figure 1. Pinouts for Mating Cable*	

Note: Connection to earth ground recommended.

1 For Banner-supplied wire.
2 When connecting the light to a *Presence*PLUS® Pro controller terminal block, the controller supply must be 24 V DC ± 10%.

Specifications

Light Source

LED Color	Wavelength	Optional Filter[3]
Infrared	850 nm	FLTI
Red	620 nm to 630 nm	FTLR
Blue	465 nm to 485 nm	FLTB
Green	520 nm to 535 nm	FLTG
White	5000 K to 8300 K	FLTB or FLTG

Supply Voltage and Current
145 mm Models: 24 V DC ± 10% at 500 mA max.
290 mm Models: 24 V DC ± 10% at 1 A max.
435 mm Models: 24 V DC ± 10% at 1.5 A max.
580 mm Models: 24 V DC ± 10% at 2 A max.
870 mm Models: 24 V DC ± 10% at 3 A max.
1160 mm Models: 24 V DC ± 10% at 4 A max.
Strobe Voltage: 5 V DC to 24 V DC
Built-in constant current regulator for LEDs
Use only with a suitable Class 2 power supply (UL) or SELV power supply (CE)
See the electrical characteristics on the product label.

Connections
Integral 5-pin M12/Euro-style male quick disconnect, accessory cordset required

Construction
Housing: black anodized aluminum
Window: acrylic

Useful Life
When operated within specifications, output will decrease less than 30% after 50,000 hours

Operating Conditions
Temperature: 0 °C to +50 °C (+32 °F to +122 °F)

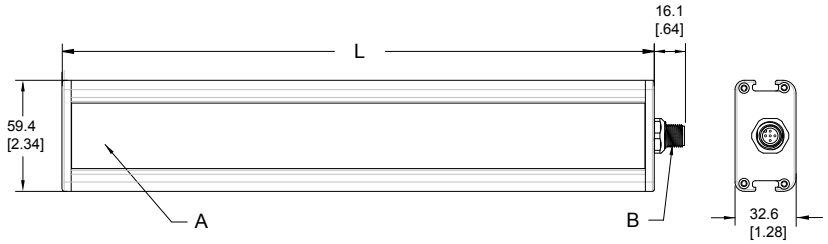
Mounting
4 M5 T-nuts included, brackets available

Environmental Rating
IEC IP50

Certification

Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise.

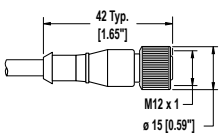
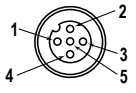


A = Window
B = 5-pin Euro-style male connector

Array Length	Length "L"	Lighted Area "A"
145 mm	171 mm (6.73 in)	161 x 35 mm (6.33 in x 1.38 in)
290 mm	316.5 mm (12.46 in)	307 x 35 mm (12.09 in x 1.38 in)
435 mm	462 mm (18.19 in)	452 x 35 mm (17.80 in x 1.38 in)
580 mm	607.5 mm (23.92 in)	598 x 35 mm (23.54 in x 1.38 in)
870 mm	898.5 mm (35.37 in)	889 x 35 mm (35.00 in x 1.38 in)
1160 mm	1189.5 mm (46.83 in)	1180 x 35 mm (46.46 in x 1.38 in)

Accessories

Cordsets

5-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	**Length**	**Style**	**Dimensions**	**Pinout (Female)**
MQDC20-506	1.83 m (6 ft)	Straight		
MQDC20-515	4.57 m (15 ft)			
MQDC20-530	9.14 m (30 ft)			

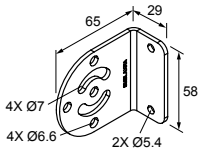
1 = Brown
2 = White
3 = Blue
4 = Black
5 = Gray

[3] Recommended Ambient Light filter kit for use with *Presence*PLUS® Cameras.

Brackets

SMBLAXRA

- Right-angle stainless steel bracket
- May be used individually or in combination with **SMBLAXU** to provide swivel adjustment

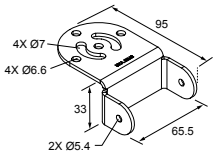


Includes:

- 2 Brackets
- 4 M5 screws (socket drive, button head)
- 4 M5 T-nuts

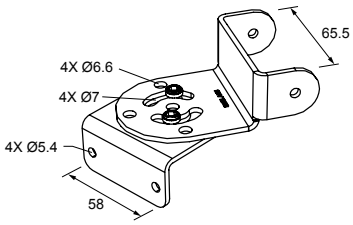
SMBLAXU

- U-shaped stainless steel bracket
- For use with **SMBLAXRA** to provide swivel adjustment



Includes:

- 2 Brackets
- 4 M5 screws (socket-drive, button head)
- 4 M5 T-nuts
- Four each stainless steel ¼-20 screws (socket drive, button head), lock nuts, washers



Combination View

Banner Engineering Corp. Limited Warranty

Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), AND WHETHER ARISING UNDER COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE.

This Warranty is exclusive and limited to repair or, at the discretion of Banner Engineering Corp., replacement. **IN NO EVENT SHALL BANNER ENGINEERING CORP. BE LIABLE TO BUYER OR ANY OTHER PERSON OR ENTITY FOR ANY EXTRA COSTS, EXPENSES, LOSSES, LOSS OF PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM ANY PRODUCT DEFECT OR FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER ARISING IN CONTRACT OR WARRANTY, STATUTE, TORT, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE.**

Banner Engineering Corp. reserves the right to change, modify or improve the design of the product without assuming any obligations or liabilities relating to any product previously manufactured by Banner Engineering Corp. Any misuse, abuse, or improper application or installation of this product or use of the product for personal protection applications when the product is identified as not intended for such purposes will void the product warranty. Any modifications to this product without prior express approval by Banner Engineering Corp will void the product warranties. All specifications published in this document are subject to change; Banner reserves the right to modify product specifications or update documentation at any time. Specifications and product information in English supersede that which is provided in any other language. For the most recent version of any documentation, refer to: www.bannerengineering.com.

For patent information, see www.bannerengineering.com/patents.

Mexican Importer

Banner Engineering de Mèxico, S. de R.L. de C.V.
David Alfaro Siqueiros 103 Piso 2 Valle oriente
San Pedro Garza Garcia Nuevo Leòn, C. P. 66269

81 8363.2714

BANNER®
more sensors, more solutions

© Banner Engineering Corp. All rights reserved