

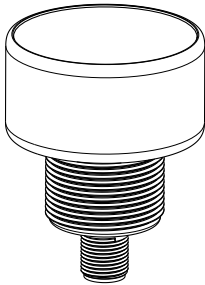
LED..S50L.. High-Intensity Spot Light



Datasheet

For use with PresencePLUS and other vision systems

For the latest technical information about this product, including specifications, dimensions, and wiring, see www.bannerengineering.com.



- Low-cost, washdown spot light for vision systems
- Continuous or strobed operation, depending on wiring
- Selectable Active High or Active Low strobe option, depending on wiring
- Optically isolated strobe signal
- Three lens options, depending on model, to vary spot size
- Illuminates a large area with an even pattern of light and no shadows
- 12 to 30V dc operation
- Cabled and quick-disconnect models available
- 50 mm diameter with flat profile and 30 mm mounting base
- Rugged sealed housing rated to IP69K

Models

Model ¹	LED Color	Lumens / mWatts	Lux / mW/cm ²		Lens Angle	Connection
			0.5 m	1 m		
LEDWS50L5-XQ	White, 5000-8300 K	295 lm	13780 lx	3445 lx	±5° (smaller, more focused spot; see graph)	5 pin Euro integral QD connector (use with 5-wire mating cordset)
LEDRS50L5-XQ	Red, 620-630 nm	110 lm	8000 lx	2000 lx		
LEDBS50L5-XQ	Blue, 465-485 nm	85 lm	4880 lx	1220 lx		
LEDGS50L5-XQ	Green, 520-535 nm	210 lm	13000 lx	3250 lx		
LEDIS50L5-XQ	Infrared, 850 nm	760 mW	4.40 mW/cm ²	1.10 mW/cm ²		
LEDUV395S50L5-XQ	Ultraviolet, 395 nm	480 mW	2.10 mW/cm ²	.525 mW/cm ²		
LEDWS50L11-XQ	White, 5000-8300 K	285 lm	5460 lx	1365 lx	±11° (larger spot; see graph)	
LEDRS50L11-XQ	Red, 620-630 nm	105 lm	2500 lx	625 lx		
LEDBS50L11-XQ	Blue, 465-485 nm	80 lm	1540 lx	385 lx		
LEDGS50L11-XQ	Green, 520-535 nm	200 lm	3900 lx	975 lx		
LEDUV395S50L11-XQ	Ultraviolet, 395 nm	420 mW	.780 mW/cm ²	.195 mW/cm ²		
LEDIS50L14-XQ	Infrared, 850 nm	665 mW	1.16 mW/cm ²	.290 mW/cm ²	±14° (larger spot; see graph)	
LEDWS50L20-XQ	White, 5000-8300 K	270 lm	2000 lx	500 lx	±20° (largest spot; see graph)	
LEDRS50L20-XQ	Red, 620-630 nm	100 lm	1040 lx	260 lx		
LEDBS50L20-XQ	Blue, 465-485 nm	75 lm	700 lx	175 lx		
LEDGS50L20-XQ	Green, 520-535 nm	190 lm	1700 lx	425 lx		
LEDUV395S50L20-XQ	Ultraviolet, 395 nm	390 mW	.420 mW/cm ²	.105 mW/cm ²		

¹ Integral QD models only are listed. For integral 2 m (6.5'ft) PVC cable, omit suffix XQ from model number (example, LEDRS50L5). A model with a QD requires a mating cordset (see [5-Pin Euro-Style Cordsets](#) on page 4).



The following caution applies to blue LED models:



CAUTION:

Risk Group 2: Possibly hazardous optical radiation emitted from this product.

Do not stare at the operating lamp. May be harmful to the eyes. Risk Group 2 (RG 2) products generally do not pose a realistic optical hazard if aversion responses limit the exposure duration or where lengthy exposures are unrealistic.

- IEC 62471

The following caution applies to ultraviolet models:



CAUTION:

Risk Group 2: UV Emitted from this product.

Eye or skin irritation may result from exposure. Use appropriate shielding and eye protection. Risk Group 2 (RG 2) products generally do not pose a realistic optical hazard if aversion responses limit the exposure duration or where lengthy exposures are unrealistic.

- IEC 62471

The following caution applies to LEDIS50L5-xx infrared models:



CAUTION:

Risk Group 1: IR Emitted from this product.

Use appropriate shielding or eye protection. Risk Group 1 (RG 1) products are safe for most use applications, except for very prolonged exposures where direct ocular exposures may be expected.

- IEC 62471

Specifications

Supply Voltage and Current

Operating voltage: 12 to 30V dc
Strobe voltage: 5 to 30V dc @ 15 mA max.
Current draw: 400 mA at 12V, 160 mA at 30V

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Light Source

Three high-intensity LEDs; see models table for color temperature or wavelengths

Strobe

Optically isolated, 40kHz max strobe frequency
5 μ s minimum on time

Useful Life

When operating within specifications, output will decrease less than 30% after 50,000 hours for visible and IR models; 20,000 hours for UV models.

Construction

Black anodized aluminum housing; acrylic window; nickel-plated QD connector or PVC-jacketed cable; black zinc-plated steel mounting nut

Mounting:

30x1.5 mm thread base mount

Environmental Rating

IEC IP67, IP69K per DIN 40050-9



NOTE: Do not spray the cable with a high-pressure sprayer or cable damage will result.

Connections

Integral 5-pin M12/Euro style QD or 2 m (6.5 ft) integral cable, depending on model; 5-pin connecting cordset required for QD models

Operating Conditions

-20 °C to +50 °C (-4 °F to +122 °F)
95% maximum relative humidity (non-condensing)

Vibration and Mechanical Shock

All models meet Mil. Std. 202F requirements method 201A (vibration: 10 to 60 Hz max., double amplitude 0.06", maximum acceleration 10G). Also meets IEC 947-5-2; 30G 11 ms duration, half sine wave.

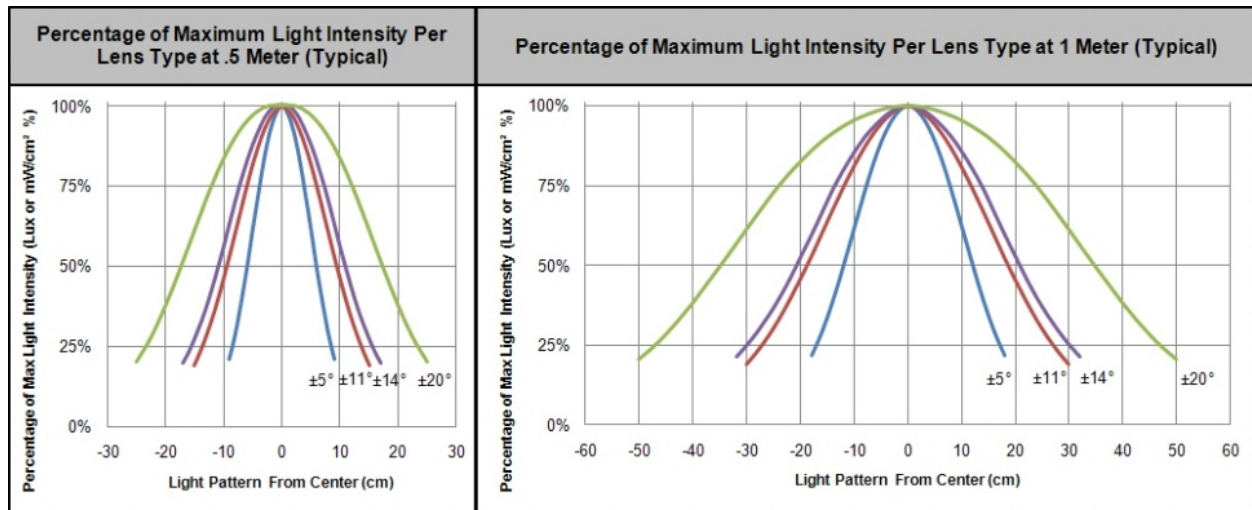
Storage Temperature

-40 °C to +70 °C (-40 °F to +158 °F)

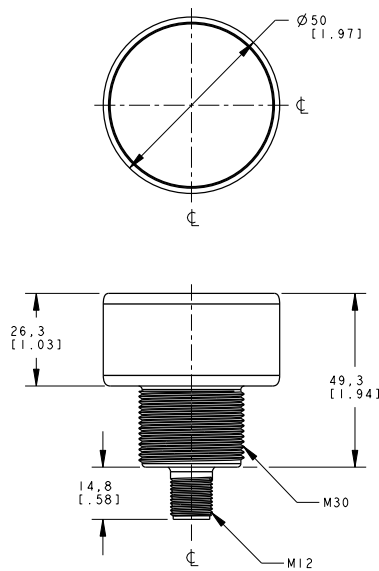
Certifications



Beam Patterns



Dimensions



Wiring Table

Wire Purpose	Cable Wire Color ²	Continuous On Mode	Strobed Mode	PresencePlus Pro Controller Terminal Block
Power Wires	Brown (1)	+12-30V dc	+12-30V dc	Pin 01 ³
	Blue (3)	common	common	Pin 02
Strobe Polarity Control	Gray (5)	open	Active Low: open	Open — Active Low
			Active High: connect to common (Blue wire)	Pin 02 — Active High
Strobe Voltage Wires	White (2)	open	0V dc = ON (Active Low) +5 to 30V dc = OFF (Active Low)	Pin 04
			0V dc = OFF (Active High) +5 to 30V dc = ON (Active High)	
	Black (4)	open	Strobe common	Pin 02

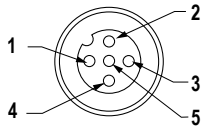
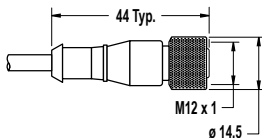
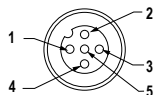
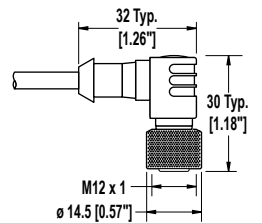


Figure 1. Pinout for Mating Cordset

Wiring Key

1 = +12-30V dc
2 = Strobe (+)
3 = Common
4 = Strobe common
5 = Active high / Active Low

5-Pin Euro-Style Cordsets

5-Pin Threaded M12/Euro-Style Cordsets (Single Ended)				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-501.5	0.50 m (1.5 ft)	Straight		 <p>1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray</p>
MQDC1-506	1.83 m (6 ft)			
MQDC1-515	4.57 m (15 ft)			
MQDC1-530	9.14 m (30 ft)			
MQDC1-506RA	1.83 m (6 ft)	Right-Angle		
MQDC1-515RA	4.57 m (15 ft)			
MQDC1-530RA	9.14 m (30 ft)			

² For Banner-supplied wire.

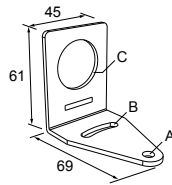
³ When connecting the light to a PresencePLUS Pro controller terminal block, the controller supply must be 24V dc \pm 10%.

Mounting Brackets

All measurements are in mm

SMB30A

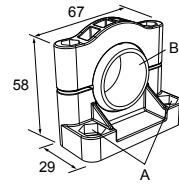
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel



Hole center spacing: A to B=40
Hole size: A=ø 6.3, B= 27.1 x 6.3, C=ø 30.5

SMB30SC

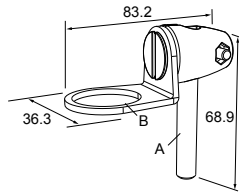
- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included



Hole center spacing: A=ø 50.8
Hole size: A=ø 7.0, B=ø 30.0

SMB30FA

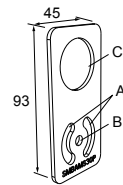
- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available



Bolt thread: SMB30FA, A= 3/8 - 16 x 2 in; SMB30FAM10, A= M10 - 1.5 x 50
Hole size: B= ø 30.1

SMBAMS30P

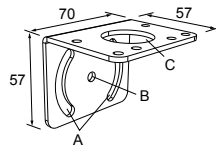
- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90° + rotation
- 12-ga. 300 series stainless steel



Hole center spacing: A=26.0, A to B=13.0
Hole size: A=26.8 x 7.0, B=ø 6.5, C=ø 31.0

SMB30MM

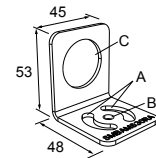
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor



Hole center spacing: A = 51, A to B = 25.4
Hole size: A = 42.6 x 7, B = ø 6.4, C = ø 30.1

SMBAMS30RA

- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90° + rotation
- 12-ga. (2.6 mm) cold-rolled steel



Hole center spacing: A=26.0, A to B=13.0
Hole size: A=26.8 x 7.0, B=ø 6.5, C=ø 31.0

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