

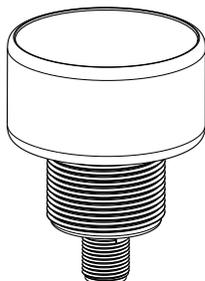
# LED..S50L.. High-Intensity Spot Light



## Datasheet

For use with PresencePLUS and other vision systems

To view or download the latest technical information about this product, including specifications, dimensions, accessories, and wiring, see [www.bannerengineering.com](http://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 V DC to 30 V DC operation
- Cabled and quick-disconnect models available
- 50 mm diameter with flat profiles and 30 mm mounting base
- Rugged sealed housing rated to IP69K per DIN 40050-9

## Models

Model <sup>1</sup>	LED Color	Lumens / mWatts	Lux / mW/cm <sup>2</sup>		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 <sup>2</sup>	1.10 mW/cm <sup>2</sup>		
LEDUV395S50L5-XQ	Ultraviolet, 395 nm	480 mW	2.10 mW/cm <sup>2</sup>	.525 mW/cm <sup>2</sup>	±11° (larger spot; see graph)	
LEDWS50L11-XQ	White, 5000-8300 K	285 lm	5460 lx	1365 lx		
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 <sup>2</sup>	.195 mW/cm <sup>2</sup>	±14° (larger spot; see graph)	
LEDIS50L14-XQ	Infrared, 850 nm	665 mW	1.16 mW/cm <sup>2</sup>	.290 mW/cm <sup>2</sup>		
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 <sup>2</sup>	.105 mW/cm <sup>2</sup>		

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:

<sup>1</sup> Integral QD models only are listed. For integral 2 m (6.5ft) 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 p. 3).



**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

## Wiring Table

Wire Purpose	Cable Wire Color <sup>2</sup>	Continuous On Mode	Strobed Mode	PresencePlus Pro Controller Terminal Block
Power Wires	Brown (1)	+12-30V dc	+12-30V dc	Pin 01 <sup>3</sup>
	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) 0V dc = OFF (Active High)    +5 to 30V dc = ON (Active High)	Pin 04
	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

## Specifications

**Supply Voltage and Current**

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

**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, 40 kHz max strobe frequency  
5  $\mu$ s minimum on time

**Useful Life**

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

**Construction**

Black anodized aluminum housing  
Acrylic window  
Nickel-plated quick disconnect or PVC-jacketed cable  
Black zinc-plated steel mounting nut

**Mounting:**

30 mm  $\times$  1.5 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 male quick disconnect or 2 m (6.5 ft) integral PVC cable, depending on model  
5-pin connecting cordset required for quick disconnect fitting models

**Operating Conditions**

-20 °C to +50 °C (-4 °F to +122 °F)  
95% maximum relative humidity (non-condensing)  
**Storage Temperature:** -40 °C to +70 °C (-40 °F to +158 °F)

**Vibration and Mechanical Shock**

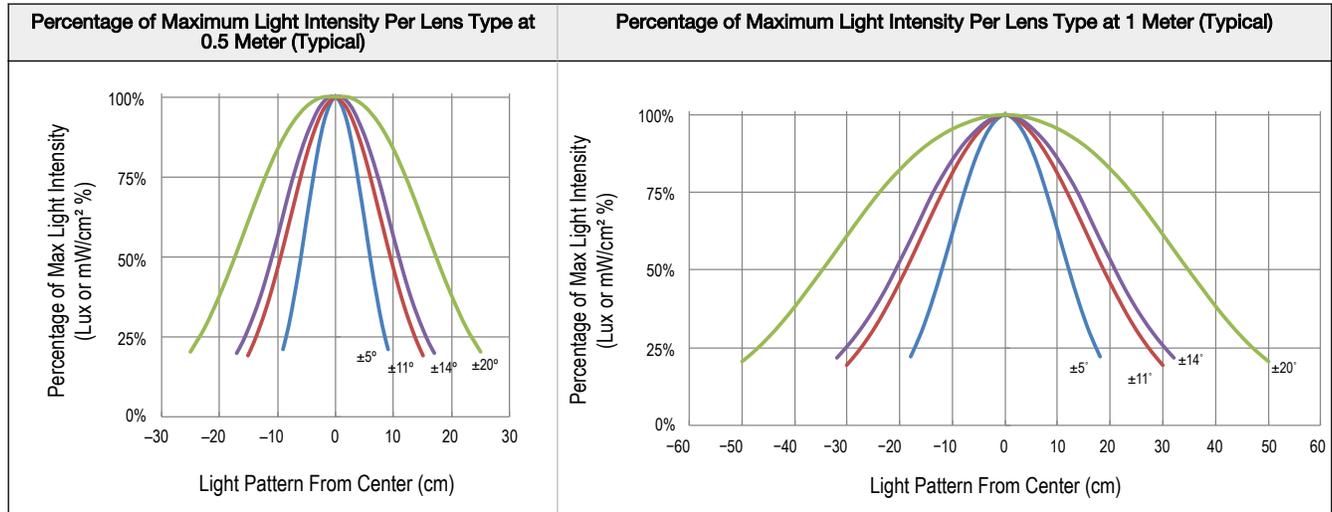
All models meet MIL-STD-202F, Method 201A (Vibration: 10 Hz to 60 Hz maximum, 0.06 inch (1.52 mm) double amplitude, 10G maximum acceleration) requirements. Also meets IEC 60947-5-2 (Shock: 30G 11 ms duration, half sine wave) requirements.

**Certifications**

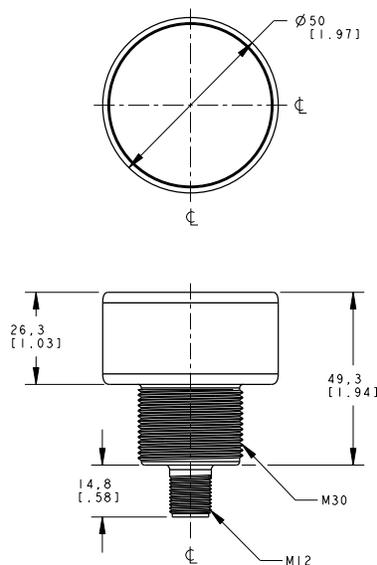
<sup>2</sup> For Banner-supplied wire.

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

## Beam Patterns



## Dimensions



## Accessories

### 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)			

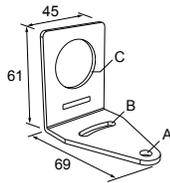
5-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC1-506RA	1.83 m (6 ft)	Right-Angle		
MQDC1-515RA	4.57 m (15 ft)			
MQDC1-530RA	9.14 m (30 ft)			

## Mounting Brackets

All measurements are in mm

### SMB30A

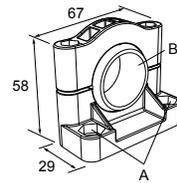
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel



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

### SMB30SC

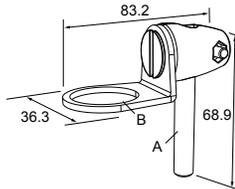
- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included



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

### SMB30FA

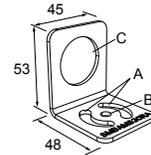
- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-ga. 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric and inch size bolt available



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

### SMBAMS30RA

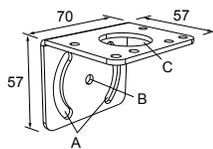
- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-ga. (2.6 mm) cold-rolled steel



**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

### SMB30MM

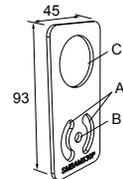
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor



**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

### 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

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