LED..S50L.. High-Intensity Spot Light

Features

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, go to 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 connector models available
- 50 mm diameter with flat profiles and 30 mm mounting base
- Rugged sealed housing rated to IP69K per ISO 20653

IMPORTANT: Read the following instructions before operating the light. Please download the complete LED..S50L.. High-Intensity Spot Light technical documentation, available in multiple languages, from www.bannerengineering.com for details on the proper use, applications, Warnings, and installation instructions of this device.

IMPORTANT: Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los LED..S50L.. High-Intensity Spot Light, disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

IMPORTANT: Lisez les instructions suivantes avant d'utiliser le luminaire. Veuillez télécharger la documentation technique complète des LED..S50L.. High-Intensity Spot Light sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

Models

Model	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)	Integral 5-pin M12 male quick-disconnect connector (use with 5-pin 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		
LEDWS50L11	White, 5000-8300 K	285 lm	5460 lx	1365 lx	±11° (larger spot; see graph)	2 m (6.5 ft) integral PVC-jacketed cable
LEDWS50L11-XQ	White, 5000-8300 K	285 lm	5460 lx	1365 lx		Integral 5-pin M12 male quick-disconnect connector (use with 5-pin mating cordset)
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		
LEDIS50L14-XQ	Infrared, 850 nm	665 mW	1.16 mW/cm^2	0.290 mW/cm^2	±14° (larger spot; see graph)	
LEDWS50L20	White, 5000-8300 K	270 lm	2000 lx	500 lx	±20° (largest spot; see graph)	2 m (6.5 ft) integral PVC-jacketed cable
LEDRS50L20	Red, 620-630 nm	100 lm	1040 lx	260 lx		
LEDWS50L20-XQ	White, 5000-8300 K	270 lm	2000 lx	500 lx		Integral 5-pin M12 male quick-disconnect connector (use with 5-pin mating cordset)
LEDRS50L20-XQ	Red, 620-630 nm	100 lm	1040 lx	260 lx		
LEDBS50L20-XQ	Blue, 465-485 nm	75 lm	700 lx	175 lx		

The following caution applies to blue LED models:

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158249
p/n: 158249 Rev. I

ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

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 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.

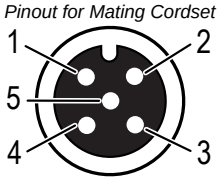
- IEC 62471

For a list of discontinued models, see Discontinued Models.

Wiring

Wire Purpose	Cable Wire Color[1]	Continuous On Mode	Strobed Mode		*Presence*Plus Pro Controller Terminal Block
Power Wires	**Brown (1)**	+12 V DC to 30 V DC	+12 V DC to 30 V DC		Pin 01[2]
	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	0 V DC = ON (Active Low)	+5 V DC to 30 V DC = OFF (Active Low)	Pin 04
			0 V DC = OFF (Active High)	+5 V DC to 30 V DC = ON (Active High)	
	Black (4)	open	Strobe common		Pin 02

Pinout for Mating Cordset



Wiring Key
1 = +12 V DC to 30 V 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 V DC to 30 V DC at 15 mA max.
Current draw: 400 mA at 12 V, 160 mA at 30 V
See the electrical characteristics on the product label.

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 µs 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 × 1.5 mm thread base mount

Environmental Rating

IP67
IP69K per ISO 20653

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

Connections

Integral 5-pin M12 male quick-disconnect connector or 2 m (6.5 ft) integral PVC-jacketed cable, depending on model
5-pin connecting cordset required for quick-disconnect connector 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.

[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%.

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Certifications

Banner Engineering BV
Park Lane, Culliganlaan 2F bus 3
1831 Diegem, BELGIUM

E476617

Required Overcurrent Protection

WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

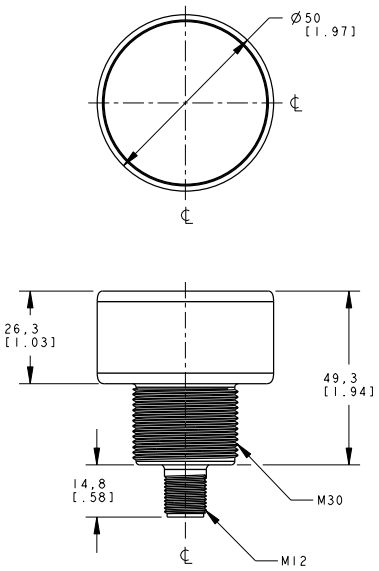
Overcurrent protection is required to be provided by end product application per the supplied table.

Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.
Supply wiring leads < 24 AWG shall not be spliced.
For additional product support, go to www.bannerengineering.com.

Supply Wiring (AWG)	Required Overcurrent Protection (A)	Supply Wiring (AWG)	Required Overcurrent Protection (A)
20	5.0	26	1.0
22	3.0	28	0.8
24	2.0	30	0.5

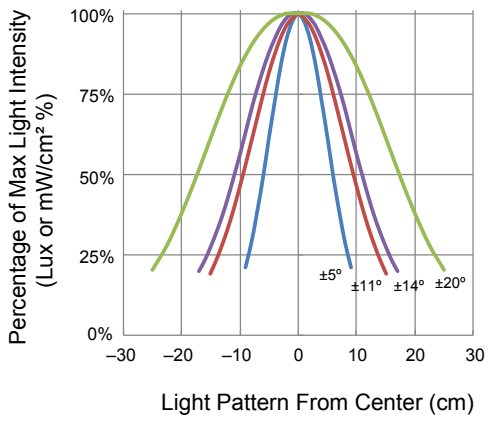
Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.

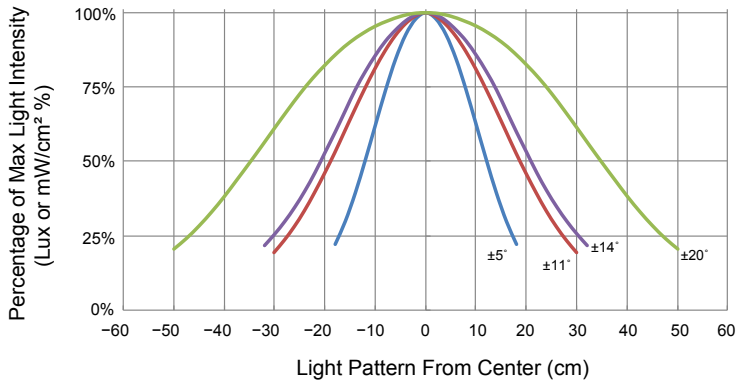


Beam Patterns

Percentage of Maximum Light Intensity Per Lens Type at 0.5 Meter (Typical)



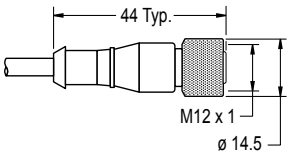
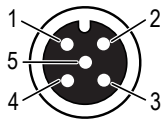
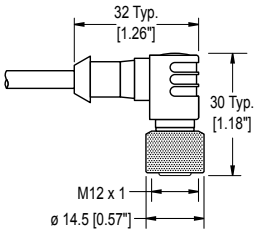
Percentage of Maximum Light Intensity Per Lens Type at 1 Meter (Typical)



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Accessories

Cordsets

5-Pin Single-Ended M12 Female Cordsets				
Model	**Length**	**Style**	**Dimensions**	**Pinout (Female)**
MQDC1-501.5	0.5 m (1.5 ft)	Straight		 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray
MQDC1-503	0.9 m (2.9 ft)			
MQDC1-506	2 m (6.5 ft)			
MQDC1-515	5 m (16.4 ft)			
MQDC1-530	9 m (29.5 ft)			
MQDC1-560	18 m (59 ft)			
MQDC1-5100	31 m (101.7 ft)			
MQDC1-506RA	2 m (6.5 ft)	Right-Angle		
MQDC1-515RA	5 m (16.4 ft)			
MQDC1-530RA	9 m (29.5 ft)			
MQDC1-560RA	19 m (62.3 ft)			

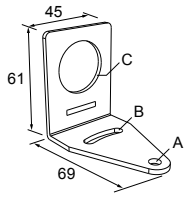
Mounting Brackets

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-gauge stainless steel
- CAD Files: DXF, PDF, IGS, STP

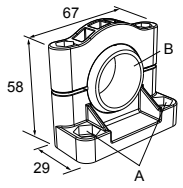
Hole center spacing: A to B=40
Hole size: A=ø 6.3, B= 27.1 × 6.3, C=ø 30.5



SMB30SC

- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included
- CAD Files: DXF, PDF, IGS, STP

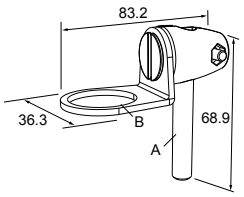
Hole center spacing: A=ø 50.8
Hole size: A=ø 7.0, B=ø 30.0



SMB30FA

- Swivel bracket with tilt and pan movement for precise adjustment
- Mounting hole for 30 mm sensor
- 12-gauge 304 stainless steel
- Easy sensor mounting to extrude rail T-slot
- Metric- and inch-size bolt available
- CAD Files: DXF, PDF, IGS, STP

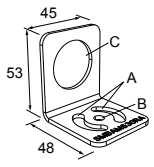
Bolt thread: SMB30FA, A=3/8 - 16 × 2 in; SMB30FAL, A=3/8 - 16 × 4 in; SMB30FAM10, A=M10 - 1.5 × 50
Hole size: B=ø 30.1



SMBAMS30RA

- Right-angle SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-gauge (2.6 mm) cold-rolled steel
- CAD Files: DXF, PDF, IGS, STP

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

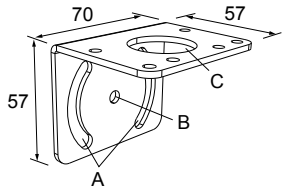


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SMB30MM

- 12-gauge stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- CAD Files: DXF, PDF, IGS, STP

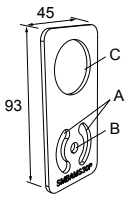
Hole center spacing: A=51, A to B=25.4
Hole size: A=42.6 × 7, B=ø 6.4, C=ø 30.1



SMBAMS30P

- Flat SMBAMS series bracket
- 30 mm hole for mounting sensors
- Articulation slots for 90°+ rotation
- 12-gauge 300 series stainless steel
- CAD Files: DXF, PDF, IGS, STP

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



Product Support and Maintenance

Discontinued Models

The following models are no longer available for order but are still covered by the information in this document.

Model	LED Color	Lumens / mWatts	Lux / mW/cm^2		Lens Angle	Connection
			0.5 m	1 m		
LEDWS50L5	White, 5000-8300 K	295 lm	13780 lx	3445 lx	±5° (smaller, more focused spot; see graph)	2 m (6.5 ft) integral PVC-jacketed cable
LEDRS50L5	Red, 620-630 nm	110 lm	8000 lx	2000 lx		
LEDBS50L5	Blue, 465-485 nm	85 lm	4880 lx	1220 lx		
LEDGS50L5	Green, 520-535 nm	210 lm	13000 lx	3250 lx		
LEDIS50L5	Infrared, 850 nm	760 mW	4.40 mW/cm^2	1.10 mW/cm^2		
LEDUV395S50L5	Ultraviolet, 395 nm	480 mW	2.10 mW/cm^2	.525 mW/cm^2		
LEDRS50L11	Red, 620-630 nm	105 lm	2500 lx	625 lx	±11° (larger spot; see graph)	
LEDBS50L11	Blue, 465-485 nm	80 lm	1540 lx	385 lx		
LEDGS50L11	Green, 520-535 nm	200 lm	3900 lx	975 lx		
LEDUV395S50L11	Ultraviolet, 395 nm	420 mW	.780 mW/cm^2	.195 mW/cm^2		
LEDIS50L14	Infrared, 850 nm	665 mW	1.16 mW/cm^2	.290 mW/cm^2	±14° (larger spot; see graph)	
LEDBS50L20	Blue, 465-485 nm	75 lm	700 lx	175 lx	±20° (largest spot; see graph)	
LEDGS50L20	Green, 520-535 nm	190 lm	1700 lx	425 lx		
LEDUV395S50L20	Ultraviolet, 395 nm	390 mW	.420 mW/cm^2	.105 mW/cm^2		
LEDUV395S50L5-XQ	Ultraviolet, 395 nm	480 mW	2.10 mW/cm^2	0.525 mW/cm^2	±5° (smaller, more focused spot; see graph)	Integral 5-pin M12 male quick-disconnect connector (use with 5-pin mating cordset)
LEDUV395S50L11-XQ	Ultraviolet, 395 nm	420 mW	.780 mW/cm^2	0.195 mW/cm^2	±11° (larger spot; see graph)	
LEDGS50L20-XQ	Green, 520-535 nm	190 lm	1700 lx	425 lx	±20° (largest spot; see graph)	
LEDUV395S50L20-XQ	Ultraviolet, 395 nm	390 mW	.420 mW/cm^2	.105 mW/cm^2		

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

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