# 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.

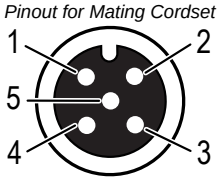
- IEC 62471

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**

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E476617

**Required Overcurrent Protection**

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

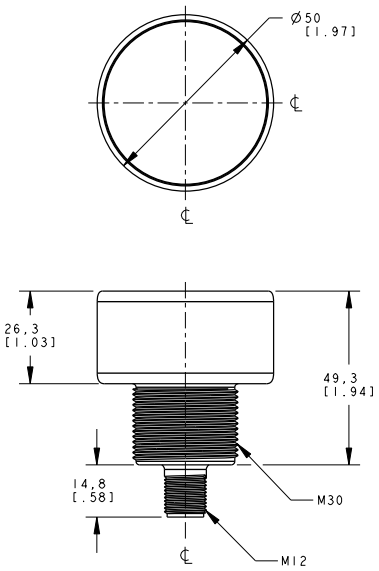
Overcurrent protection is required to be provided by end product application per the supplied table.

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 |

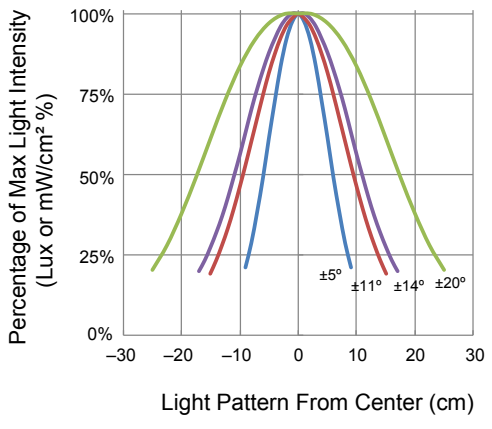
## Dimensions

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

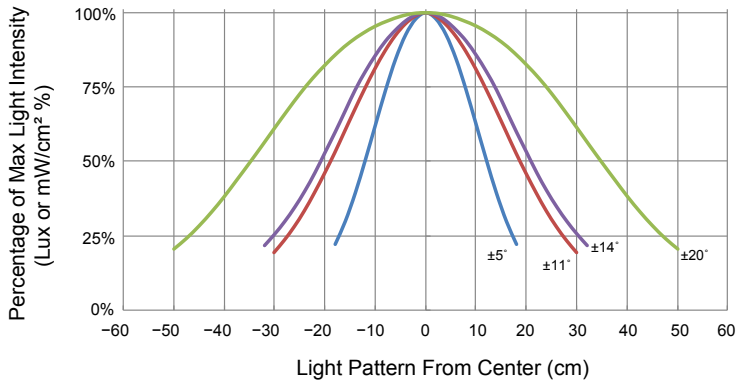



## Beam Patterns

**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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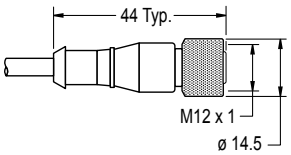
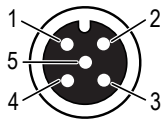
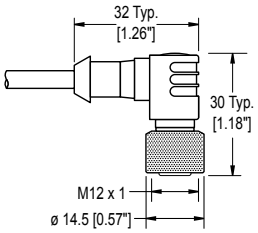
# Accessories

## Cordsets

| 5-Pin Single-Ended M12 Female Cordsets | | | | |
|---|---|---|---|---|
| **Model** | **Length** | **Style** | **Dimensions** | **Pinout (Female)** |
| **MQDC1-501.5** | 0.5 m (1.5 ft) | Straight |  | <br>1 = Brown<br>2 = White<br>3 = Blue<br>4 = Black<br>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) | | | |

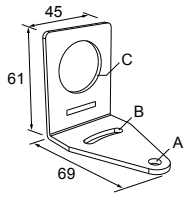
## Mounting Brackets

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

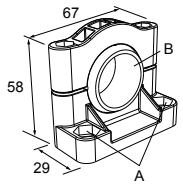
**Hole center spacing:** A to B=40
**Hole size:** A=ø 6.3, B= 27.1 × 6.3, C=ø 30.5




**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

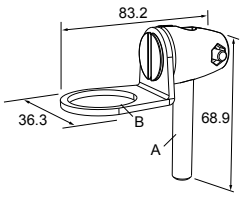
**Hole center spacing:** A=ø 50.8
**Hole size:** A=ø 7.0, B=ø 30.0




**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

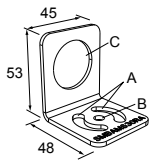
**Bolt thread:** SMB30FA, A=3/8 - 16 × 2 in; SMB30FAL, A=3/8 - 16 × 4 in; SMB30FAM10, A=M10 - 1.5 × 50
**Hole size:** B=ø 30.1




**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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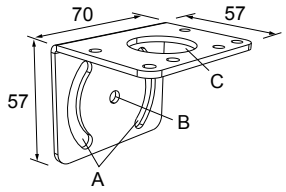
**SMB30MM**

- 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

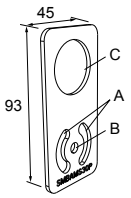
**Hole center spacing:** A=51, A to B=25.4
**Hole size:** A=42.6 × 7, B=ø 6.4, C=ø 30.1




**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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## Mexican Importer

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