# LEDxR90S Series Sealed Ring Lights

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## Datasheet

*LED Ring Lights for Use with PresencePLUS® Pro Sealed Sensors*

- Rugged, waterproof housing, rated IEC IP68
- 90 mm light diameter
- Solid-state LED matrix; continuous or strobed operation is selectable via sensor software
- Available with 316 stainless steel or nickel-plated aluminum housing and a choice of either acrylic or tempered optical glass windows
- Mounts directly to PresencePLUS® Pro washdown sensors
- LEDs directly illuminate target

Shown with cable installed; see Cables list for options

> **Important:** Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los LEDxR90S Sealed Ring Light, disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

## Models

| Models | | LED Color | Housing | Optional Ambient Light Filter Kit | Optional Polarizing Filter Kit |
|---|---|---|---|---|---|
| Acrylic Window | Glass Window | | | | |
| LEDIR90S-P | LEDIR90S-G | Infrared, 940 nm | Nickel-plated aluminum | FLTI, included with IR lights | LEDRPFK90 |
| LEDRR90S-P | LEDRR90S-G | Visible red, 630 nm | | FLTR, included with LEDRPFK90 | |
| LEDWR90S-P | LEDWR90S-G | White, all visible | | FLTB or FLTG | |
| LEDBR90S-P | LEDBR90S-G | Blue, 464 nm to 475 nm | | FLTB | |
| LEDGR90S-P | LEDGR90S-G | Green, 520 nm to 540 nm | | FLTG | |
| LEDIR90SS-P | LEDIR90SS-G | Infrared, 940 nm | 316 Stainless steel | FLTI, included with IR lights | |
| LEDRR90SS-P | LEDRR90SS-G | Visible red, 630 nm | | FLTR, included with LEDRPFK90 | |
| LEDWR90SS-P | LEDWR90SS-G | White, all visible | | FLTB or FLTG | |
| LEDBR90SS-P | LEDBR90SS-G | Blue, 464 nm to 475 nm | | FLTB | |
| LEDGR90SS-P | LEDGR90SS-G | Green, 520 nm to 540 nm | | FLTG | |

## Installing the Ring Light

> **Note:** Before installing this product, Banner Engineering Corp. recommends installing a light filter behind the lens. The filter improves image quality by reducing unwanted ambient light. See Models table for further information.

1. Install and focus lens while holding ring light beside the sensor, illuminating the target.
2. Thread on ring light assembly until it is seated against the sensor.
3. Loosen the set screw and rotate the cable outlet to the desired position. Tighten set screw. Do not overtighten.
4. Install cable (not included, see page 3) to cable outlet.
5. Connect cable to power source.
6. Connect strobe signal output from Pro controller to strobe input wire (black) of light (optional).

**Sensing Shiny Surfaces**. To eliminate direct reflections without using polarizing filters, angle the sensor approximately 15° (or more) from perpendicular to a shiny surface.

**Polarizing Kit**. If it is necessary to mount the sensor at a 90° angle to a shiny surface, the polarizing filter kit provides filters for both the LED ring light and sensor to reduce the negative effects of strong, direct light reflections. The polarizing filters reduce the amount of light returned to the sensor.

## Wiring Table

| Cable Wire | PresencePLUS Pro Controller Terminal Block | External Power Supply (Strobed) | External Power Supply (Continuous) |
|---|---|---|---|
| Brown | Pin 1 (+V[1]) | +V | +V |
| Blue | Pin 2 (-V[1]) | -V | -V |
| Black | Pin 4 (strobe) | +5V DC OFF<br>-V ON | -V |

## Cleaning Instructions

Regularly remove any dust, dirt, or fingerprints from the light source.

1. Blow off dust using anti-static compressed air.
2. If necessary, use a lens cloth and lens cleaner or window cleaner to wipe off remaining debris. Do not use any other chemicals for cleaning.

## Specifications

**Supply Voltage and Current**
Infrared: 24V DC at 180 mA maximum
All other colors: 24V DC at 250 mA maximum
See the electrical characteristics on the product label.

**Connections**
8 mm male Pico-style connector; accessory cable required for operation, see Cables for the LEDxR90S Series Sealed Ring Lights on p. 3 for options

**Construction**
Housing: Nickel-plated aluminum or 100% 316 stainless steel, depending on model
Window: Acrylic or tempered optical glass window, depending on model

**Environmental Rating**
Nickel-plated models: IEC IP68
Stainless steel models: NEMA 4X; IEC IP68

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

**Light Source**
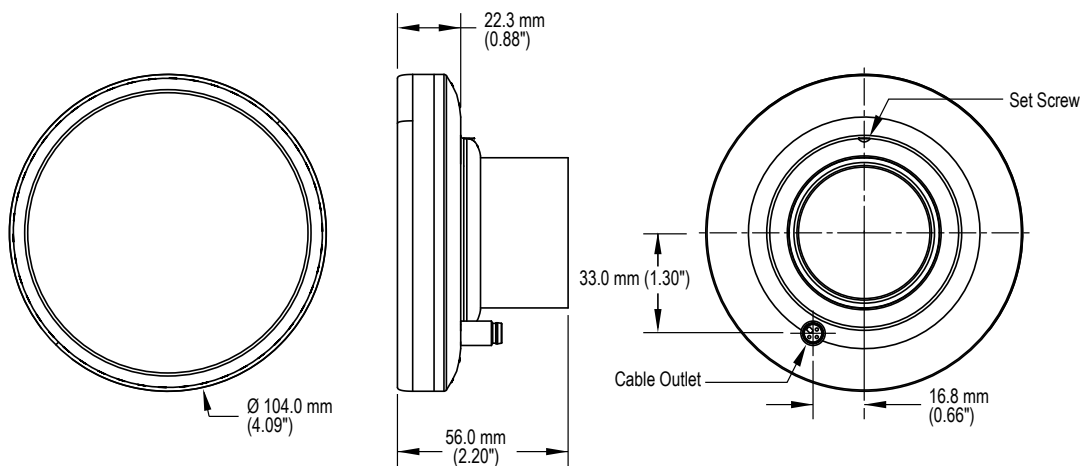LED, see Models table for wavelengths

**Illumination**
High-intensity ring light

**Useful Life**
When operated within specifications, output will decrease less than 30% after 20,000 hours and less than 50% (less than 40% for red and IR models) after 30,000 hours.

## Dimensions



22.3 mm (0.88")
33.0 mm (1.30")
Set Screw
Cable Outlet
16.8 mm (0.66")
Ø 104.0 mm (4.09")
56.0 mm (2.20")

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[1] For Banner-supplied wire

## Cables for the LEDxR90S Series Sealed Ring Lights

| Model | Length | Description | Use With |
|---|---|---|---|
| PKG3M-4 | 4 m (13 ft) | Female Pico-style (8 mm) connector at one end; flying leads at opposite end | Nickel-plated aluminum models |
| PKG3M-7 | 7 m (23 ft) | | |
| PKG3M-10 | 10 m (33 ft) | | |
| PKGV3M-4 | 4 m (13 ft) | Female Pico-style (8 mm) 316 stainless steel connector at one end; flying leads at opposite end | Stainless steel models |
| PKGV3M-7 | 7 m (23 ft) | | |
| PKGV3M-10 | 10 m (33 ft) | | |

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