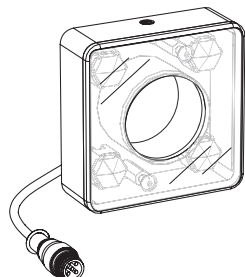


# LED High-Intensity Ring Light



## Datasheet

High-Intensity LED Ring Light for use with PresencePLUS and other Vision Systems



- Compact ring light for PresencePLUS and other Vision Systems
- Four extremely bright LEDs for illumination of targets from 0.15 meters to beyond 2 meters (0.49 feet to 6.56 feet)
- Continuous or strobed operation
- Optically isolated strobe signal
- Fixed or adjustable intensity, depending on model
- Maintenance-free, rugged construction
- Evenly and intensely illuminates a 610 millimeters (24 inches) diameter at 1 meter (3.28 feet)

## Models

Model <sup>1</sup>	LED Color	Bracket	Cable
LEDRR70XD5-XQ	Red, 620 nm to 630 nm	Optional bracket available (see Mounting Bracket)	150 mm (6 in) pigtail with threaded 5-pin Euro-style connector <sup>2</sup>
LEDWR70XD5-XQ	White, 5000 K to 8300 K		
LEDBR70XD5-XQ	Blue, 465 nm to 485 nm		
LEDGR70XD5-XQ	Green, 520 nm to 535 nm		
LEDIR70XD5-XQ	Infrared, 850 nm		
LEDUV395R70XD5-XQ	UV, 395 nm		
LEDRR70XD5-XM	Red, 620 nm to 630 nm	Built-in P4 bracket (see dimensions)	300 mm (12 in) pigtail with threaded 3-pin Pico-style connector <sup>3</sup>
LEDWR70XD5-XM	White, 5000 K to 8300 K		
LEDBR70XD5-XM	Blue, 465 nm to 485 nm		
LEDGR70XD5-XM	Green, 520 nm to 535 nm		
LEDIR70XD5-XM	Infrared, 850 nm		
LEDUV395R70XD5-XM	UV, 395 nm		

The following caution applies to UV 395 nm 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

<sup>1</sup> For models with controllable intensity, add "P" to the model number (e.g., LEDRR70XD5-PQ).

<sup>2</sup> Requires Euro-style cordset.

<sup>3</sup> Connects directly to the P4 sensor.



## Wiring

Wire Purpose	Cable Wire Color <sup>4</sup>	Continuous On Mode	Strobed Mode	PresencePlus Pro Controller Terminal Block
Power Wires	Brown (1)	+24 V dc	+24 V dc	Pin 01 <sup>5</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	0 V dc = ON (Active Low)      +5 V dc to 24 V dc = OFF (Active Low)	Pin 04
			0 V dc = OFF (Active High)      +5 V dc to 24 V dc = ON (Active High)	
	Black (4)	open	Strobe common	Pin 02

Figure 1. Pinouts for Mating Cordset

## Light Intensity Adjustment

Turn the 270° intensity potentiometer with a small flat-blade screwdriver to adjust the light's intensity.

1. Apply power to the light and turn the potentiometer all the way clockwise for maximum intensity.
2. If the object to be sensed is too bright at maximum intensity, turn the potentiometer counterclockwise, a little at a time, testing with the target object, until the correct brightness is achieved.

## Specifications

### Light Source

Four high-intensity LEDs; see models table for wavelengths

### Illumination

610 mm (24 in) diameter usable light pattern at 1 m

### Strobe

Optically isolated

### Supply Voltage and Current

**Operating Voltage:** 24 V dc  $\pm 10\%$

**Strobe Voltage:** 5 V dc to 24 V dc @ 15 mA maximum

**Current Draw at Full Intensity:** 350 mA maximum

Built-in constant current regulator for LEDs

Potentiometer controls variable intensity for "P" models

### Construction

**Enclosure rating:** IP50

**Housing:** aluminum, black anodized

**Window:** acrylic, clear with frosted diffusing surface on inside

**Bracket:** aluminum, black anodized. Attaches ring light directly to PresencePLUS P4 with 2 included M4x14 screws

### Useful Life

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

### Operating Conditions

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

**Humidity:** 90% maximum relative humidity (non-condensing)

### Certifications



### Light Characteristics

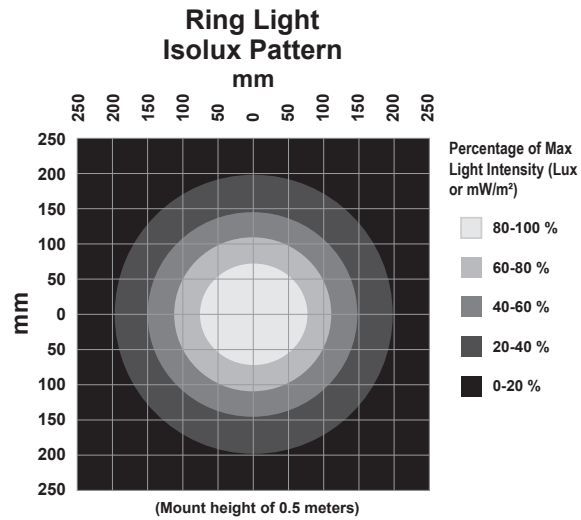
Values shown are typical at 25°C.

	Lumens				mWatts	
	Cool White	Green	Red	Blue	IR	UV395
LEDxR70	390	340	240	130	945	475

<sup>4</sup> For Banner-supplied wire.

<sup>5</sup> When connecting the light to a PresencePLUS Pro controller terminal block, the controller supply must be 24 V dc  $\pm 10\%$ .

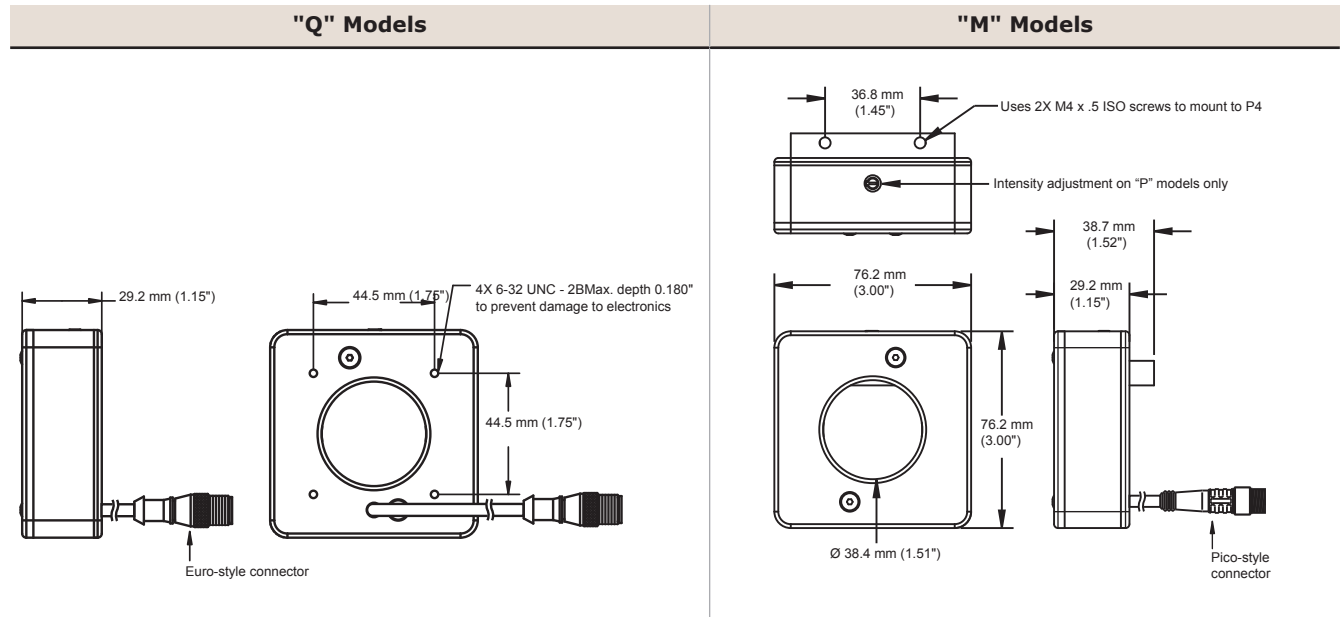
## Optical Data



Values shown are typical at 25 °C.

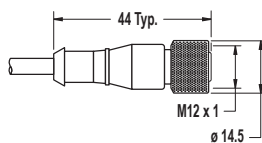
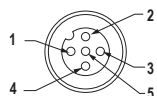
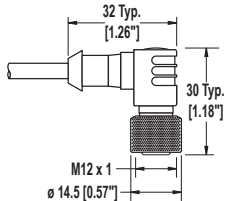
Distance (m)	Max Center Beam Lux (lux)				Max Center Beam Irradiance (mW/m <sup>2</sup> )		Beam Width (m)	
	Cool White	Green	Red	Blue	IR	UV395	Vertical (Spread 29.6°)	Horizontal (Spread 28.4°)
0.25	16,620	14,489	10,228	5,540	40,272	20,242	0.13	0.13
0.50	5,150	4,490	3,169	1,717	12,479	6,272	0.26	0.25
1.00	1,125	981	692	375	2,726	1,370	0.53	0.51

## Dimensions



All measurements are listed in millimeters [inches], unless noted otherwise.

## 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)				

## Accessory Brackets

### SMBPPRHI

- Black zinc plated cold rolled steel bracket
- Mounts directly to PresencePLUS Pro sensor
- Includes: 2 – 6-32 screws (socket drive, button head) 4 – M3 screws (socket drive, cap head)



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