# 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		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	Optional bracket available (see		
LEDGR70XD5-XQ	Green, 520 nm to 535 nm	Mounting Bracket)		
LEDI R70XD5-XQ	Infrared, 850 nm			
LEDUV395R70XD5-XQ	UV, 395 nm			
LEDRR70XD5-XM	RR70XD5-XM Red, 620 nm to 630 nm			
LEDWR70XD5-XM	White, 5000 K to 8300 K		300 mm (12 in) pigtail with threaded 3-	
LEDBR70XD5-XM	Blue, 465 nm to 485 nm	Built-in P4 bracket (see dimensions)		
LEDGR70XD5-XM	Green, 520 nm to 535 nm	built-iii r4 bracket (See diffierSions)	pin Pico-style connector <sup>3</sup>	
LEDI R70XD5-XM	Infrared, 850 nm			
LEDUV395R70XD5-XM	395R70XD5-XM UV, 395 nm			

The following caution applies to UV 395 nm models:



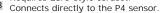
#### CAUTION:

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

Requires Euro-style cordset.





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

### 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 Gray (5) Control		Active Low: open	Open — Active Low		
	Gray (5)	open	Active High: connect to common (Blue wire)	Pin 02 — Active High	
Strobe Voltage Wires	\\/bita (2)	White (2) open	0 V dc = ON (Active Low) +5 V dc to 24 V dc = OFF (Active Low)	Pin 04	
	writte (2)		0 V dc = OFF (Active High) +5 V dc to 24 V dc = ON (Active High)		
	Black (4)	open	Strobe common	Pin 02	
			(1) +24V dc (2) Strobe (+)		

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.

(4) Strobe Common —

- 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 ±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

(5)Active High/Active Low

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**

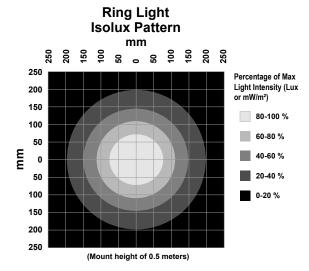
Values shown are typical at 25°C.

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

For Banner-supplied wire

When connecting the light to a PresencePLUS Pro controller terminal block, the controller supply must be 24 V dc ± 10%.

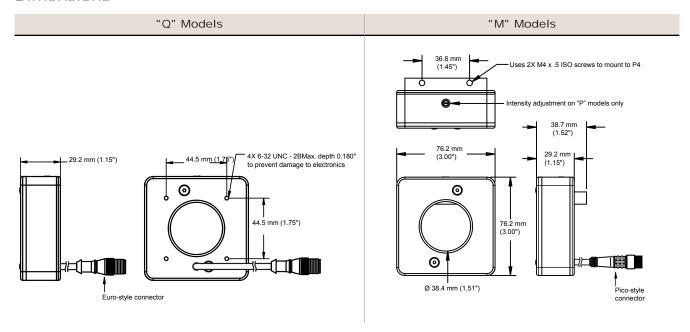
#### Optical Data



Values shown are typical at 25  $^{\circ}\text{C}.$ 

Distance (m)	Max Center Beam Lux (lux)			Max Center Beam Irradiance (mW/m²)		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)		<del></del>				
MQDC1-506	1.83 m (6 ft)	Straight		1 - 2			
MQDC1-515	4.57 m (15 ft)						
MQDC1-530	9.14 m (30 ft)		M12 x 1 → g 14.5 →				
MQDC1-506RA	1.83 m (6 ft)			1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray			
MQDC1-515RA	4.57 m (15 ft)		32 Typ. [1.26"] 30 Typ. [1.18"]  M12 x 1  ø 14.5 [0.57"]				
MQDC1-530RA	9.14 m (30 ft)	Right-Angle					

## **Accessory Brackets**

#### SMBPPRHI

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



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