LED Series Sealed High-Intensity Area Lights



Datasheet

High-Power Lighting for use with Banner Vision Systems

To view or download the latest technical information about this product, including specifications, dimensions, accessories, and wiring, see www.bannerengineering.com.



- Rugged, waterproof housing, rated IEC IP68
- Compact area light for Banner Vision systems
- Five extremely bright LEDs for illumination of targets from 0.15 meters to beyond 2 meters
- Smooth exterior for easy cleaning during washdown
- Optically isolated strobe signal
- Available with 316 stainless steel or nickel-plated aluminum housing and a choice of either acrylic or tempered optical glass windows
- Fixed or adjustable intensity, depending on model
- Selectable Active High or Active Low strobe option



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

Models

Nickel-Plated Aluminum Housing

	LED Color		
Acrylic Window	Glass Window	Diffuse Window (acrylic)	
LEDRA70AP5-XQ	LEDRA70AG5-XQ	LEDRA70AD5-XQ	Red, 620 nm to 630 nm
LEDWA70AP5-XQ	LEDWA70AG5-XQ	LEDWA70AD5-XQ	White, 5000 K to 8300 K
LEDBA70AP5-XQ	LEDBA70AG5-XQ	LEDBA70AD5-XQ	Blue, 465 nm to 485 nm
LEDGA70AP5-XQ	LEDGA70AG5-XQ	LEDGA70AD5-XQ	Green, 520 nm to 535 nm
LEDIA70AP5-XQ	LEDIA70AG5-XQ	LEDIA70AD5-XQ	Infrared, 850 nm
	LEDUV365A70AG5-XQ		UV, 365 nm
LEDUV395A70AP5-XQ	LEDUV395A70AG5-XQ	LEDUV395A70D5-XQ	UV, 395 nm

316 Stainless Steel Housing

	LED Color		
Acrylic Window	Glass Window	Diffuse Window (acrylic)	
LEDRA70SSP5-XQ	LEDRA70SSG5-XQ	LEDRA70SSD5-XQ	Red, 620 nm to 630 nm
LEDWA70SSP5-XQ	LEDWA70SSG5-XQ	LEDWA70SSD5-XQ	White, 5000 K to 8300 K
LEDBA70SSP5-XQ	LEDBA70SSG5-XQ	LEDBA70SSD5-XQ	Blue, 465 nm to 485 nm
LEDGA70SSP5-XQ	LEDGA70SSG5-XQ	LEDGA70SSD5-XQ	Green, 520 nm to 535 nm
LEDIA70SSP5-XQ	LEDIA70SSG5-XQ	LEDIA70SSD5-XQ	Infrared, 850 nm
	LEDUV365A70SSG5-XQ		UV, 365 nm
LEDUV395A70SSP5-XQ	LEDUV395A70SSG5-XQ	LEDUV395A70SSD5-XQ	UV, 395 nm

The following caution applies to UV, 365 nm models:



For models with adjustable intensity, replace "XQ" with "PQ" in the model number (for example, LEDRA70AP5-PQ).

For models with adjustable intensity, replace "XQ" with "PQ" in the model number (for example, LEDRA70SSP5-PQ).



CAUTION:

Risk Group 1: UV Emitted from this product.

Minimize exposure to eyes or skin. Use appropriate shielding and 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

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

Wiring

Wire Purpose	${\rm Cable}{\rm Wire}{\rm Color}^3$	Continuous On Mode	Strobed Mode	PresencePlus Pro Controller Terminal Block	
Power Wires	Brown (1)	+24 V DC	+24 V DC	Pin 01 ⁴	
	Blue (3)	common	common	Pin 02	
Strobe Polarity	Ones: (E)		Active Low: open	Open — Active Low	
Control	Gray (5) open		Active High: connect to common (Blue wire)	Pin 02 — Active High	
	trobe Voltage White (2)	MA-H- (0)		0 V DC = ON (Active Low) +5 V DC to 24 V DC = OFF (Active Low)	Pin 04
Strobe Voltage Wires		open	0 V DC = OFF (Active High) +5 V DC to 24 V DC = ON (Active High)	Pin 04	
111100	Black (4)	open	Strobe common	Pin 02	
(1) +24V dc (4) Strobe Common (5) Active High/Active Low Figure 1. Pinouts for Mating Cordsets					

Light Adjustment (Adjustable Intensity Models Only)



Figure 2. Potentiometer Adjuster

- 1. Remove the plug as shown in the figure, using a small flat-blade screwdriver.
- Adjust the light's intensity by turning the 270° Intensity potentiometer with the screwdriver. Apply power to the light and turn the potentiometer all the way clockwise for maximum intensity.
- 3. If the object to be sensed is too bright at maximum intensity, turn the potentiometer down a little at a time, testing with the object, until the correct brightness is achieved.
- 4. When adjustment is complete, reinsert the plug.

For Banner-supplied wire.
 When connecting the light to

When connecting the light to a *Presence*PLUS Pro controller terminal block, the controller supply must be 24 V DC ± 10%.

Specifications

Supply Voltage and Current

Operating Voltage: 24 V DC ± 10% Strobe Voltage: 5 V DC to 24 V DC at 15 mA max. Current Draw at Full Intensity: 500 mA max.

Built-in constant current regulator for LEDs Adjustable intensity control varies intensity for "P" models

Use only with a suitable Class 2 power supply (UL) or SELV power supply (CE)

See the electrical characteristics on the product label.

Light Source

Five high-intensity LEDs; see models table for wavelengths

Illumination

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

Strobe

Optically isolated

Connections

Integral 5-pin M12/Euro-style male quick disconnect, accessory cordset required

Light Characteristics: Clear and Diffuse Window

Values shown are typical @ 25°C.

Construction

Nickel-plated aluminum or stainless steel housing, depending on model; acrylic or glass window, depending on model

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

0 °C to +50 °C (+32 °F to +122 °F) 95% maximum relative humidity (non-condensing)

Environmental Rating

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

Certifications



	Lumens					mWatts		
	Cool White	Green	Red	Blue	IR	UV395	UV365 ⁵	
LEDxA70	575	450	225	165	1170	630	440	

Optical Data



Area Light Diffuse Window **Isolux Pattern** mm



Lux and irradiance values shown are typical at 25 °C and with clear windows; light intensity lowered by 40% on diffuse window models.

Distance (m)	Max Center Beam Lux (lux)			Max Center Beam Irradiance (mW/m²)			Beam Width (m)		
	Cool White	Green	Red	Blue	IR	UV395	UV365 ⁶	Vertical (Spread 29.1°)	Horizontal (Spread 30.7°)
0.25	51,440	40,257	20,129	14,761	104,669	39,363	56,360	0.13	0.14
0.50	18,550	14,517	7,259	5,323	37,745	14,195	20,324	0.26	0.27
1.00	5,110	3,999	2,000	1,466	10,398	3,910	5,599	0.52	0.55

Only available in sealed models with a glass window. Only available in sealed model with glass window. 5 6

Dimensions

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



Accessories

Cordsets

5-Pin Threaded M12/Euro-Style Cordsets—Single Ended					
Model	Length	Style	Dimensions	Pinout (Female)	
MQDC20-506	1.83 m (6 ft)				
MQDC20-515	4.57 m (15 ft)		42 Typ	1 (000)	
MQDC20-530	9.14 m (30 ft)	Straight	[1.65"] M12 x 1 - ø 15 [0.59"] -	4 5 1 = Brown 2 = White 3 = Bluek 4 = Black 5 = Gray	

5-Pin Threaded M12/Euro-Style Cordsets with Stainless Steel Nut—Single Ended					
Model	Length	Style	Dimensions	Pinout (Female)	
MQDC20SS-506	1.83 m (6 ft)				
MQDC20SS-515	4.57 m (15 ft)		42 Typ.	1 (000)	
MQDC20SS-530	9.14 m (30 ft)	Straight	[1.55 [°]] M12 x 1 J o 15 [0.59 [°]] J	4 1 = Brown 2 = White 3 = Blue 4 = Black 5 = Gray	

Brackets

SMBASCM

- 316 stainless steel columnmounting bracket with 430 stainless steel threaded insert
- Four 1/4-20 stainless steel screws included



SMBAMS70AS

- 316 stainless steel right-angle bracket
- Articulated slots for 90+
 degrees rotation
- Four ¼-20 stainless steel screws included



Filters (Optional)

Light filters are available in red, white, blue, green, infrared, and other options. Visit http://www.bannerengineering.com to determine which filter is best for your application and Vision system.

Replacement Window Kits

Model	Description
LEDA70SW-P	Clear acrylic
LEDA70SW-G	Clear glass
LEDA70SCDW-P	Clear diffuse acrylic
LEDA70SWDW-P	White diffuse acrylic

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