LED..O..M Series Diffused On-Axis Lights

BANNER® more sensors, more solutions

Uniform Lighting for Machine Vision Applications

Features

- Diffused on-axis illumination for uniform lighting on specular surfaces
- Five light colors
- Two sizes available
- Continuous or strobed operation selectable via sensor software
- Glass dust-covered models available (see table below for models ending in -D)
- Bracket options available

Models

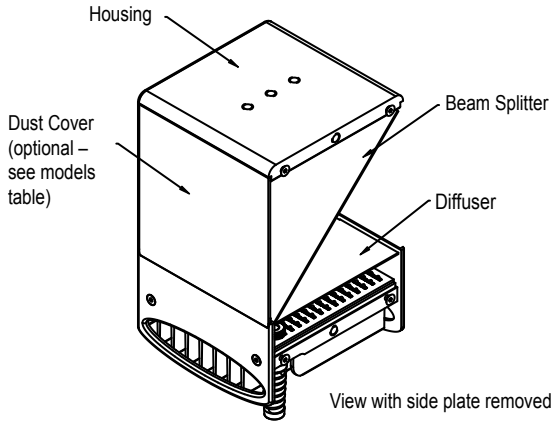| Model		Color	Aper-ture Size	Cable*	Connections	Ambient Light Filter Kit
Without Dust Cover	**With Dust Cover****					
LEDRO50M	**LEDRO50M-D**	Visible Red (630 nm)	50 mm	0.6 m (2') attached pigtail	8 mm male Pico-style (for direct connection to *Presence*PLUS P4 sensor)	FLTR
LEDIO50M	**LEDIO50M-D**	Infrared (880 nm)				FLTI
LEDBO50M	**LEDBO50M-D**	Blue (470 nm)				FLTB
LEDWO50M	**LEDWO50M-D**	White (5500K)				—
LEDGO50M	**LEDGO50M-D**	Green (530 nm)				FLTG
LEDRO100M	**LEDRO100M-D**	Visible Red (630 nm)	100 mm			FLTR
LEDIO100M	**LEDIO100M-D**	Infrared (880 nm)				FLTI
LEDBO100M	**LEDBO100M-D**	Blue (470 nm)				FLTB
LEDWO100M	**LEDWO100M-D**	White (5500K)				—
LEDGO100M	**LEDGO100M-D**	Green (530 nm)				FLTG

* Extension cables with flying leads are available for connecting to models other than *Presence*PLUS P4.

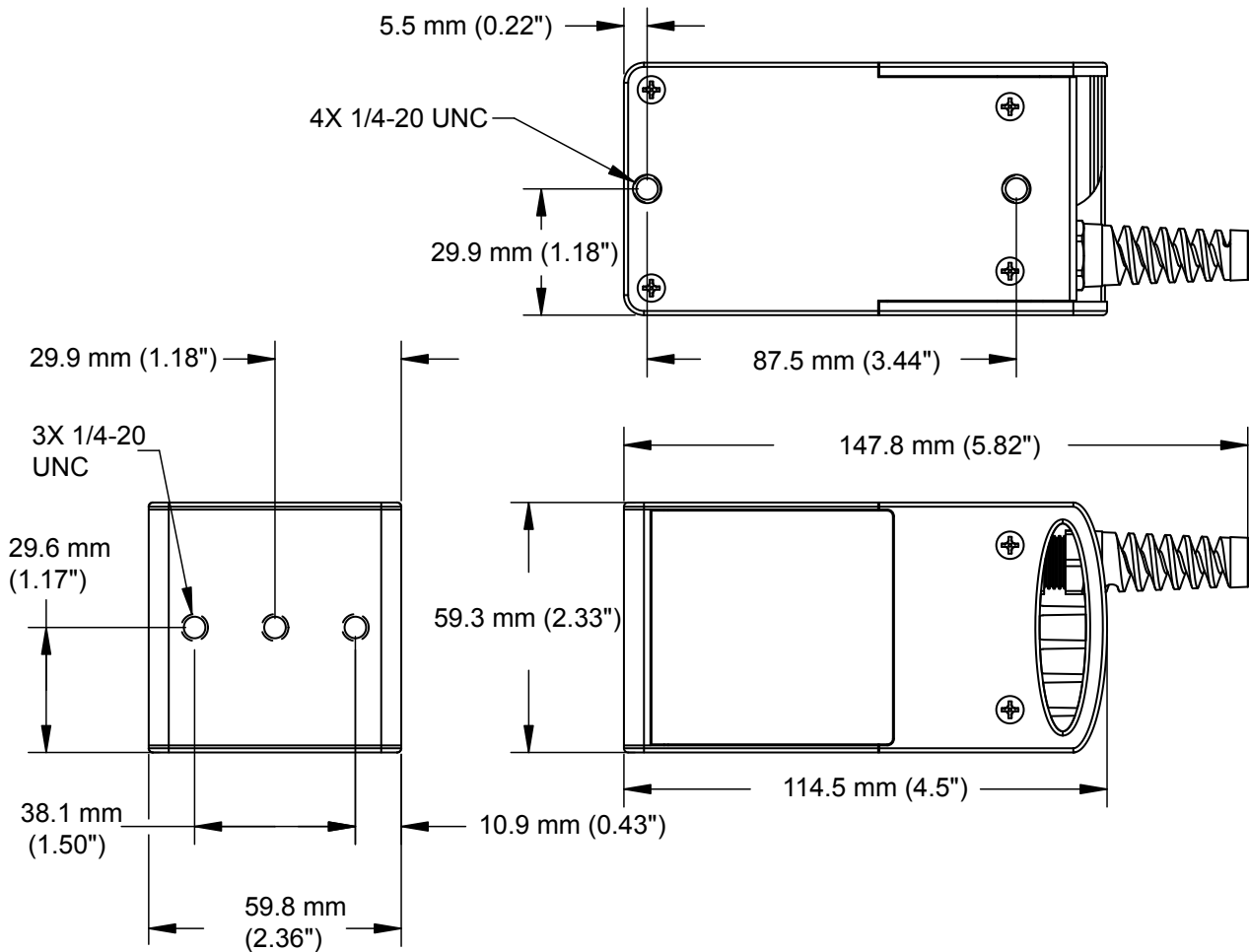** Optical glass anti-reflective coating, both sides

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Specifications

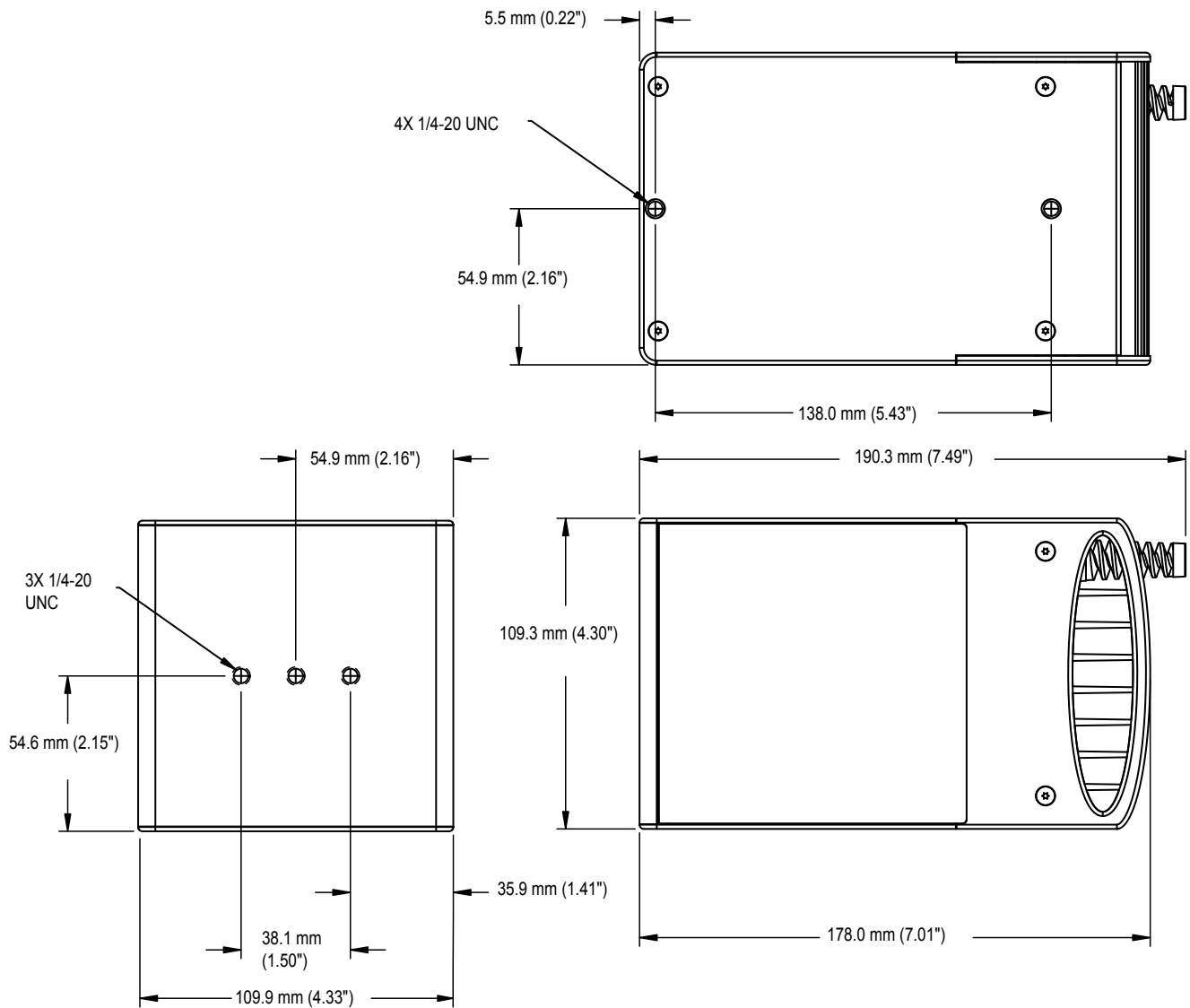| Feature	Description
Light Source	Visible red LED (630 nm), Infrared (880 nm), Blue (470 nm), White (5500 K), or Green (530 nm), depending on model
Supply Voltage and Current	24V dc ± 10% 500 mA max., 125 mA max for 50 mm models. Direct connect to *Presence*PLUS P4 sensor operating at 24V dc only.
Construction	**Housing:** Aluminum with black anodizing **Beam Splitter:** Optical glass with optical coatings on both sides. **Diffuser:** High-precision cast acrylic **Dust Cover:** Optical glass with broadband anti-reflective coating (425 – 675 nm) (some models)
Useful Life	When operated within specifications, output will decrease less than 20% after 10,000 hours and less than 30% after 20,000 hours (based on continuous operation). NOTE: Actual useful life of strobed lights depends on duty cycle.
Operating Conditions	**Temperature:** 0° to +50° C (+32° to +122° F) **Maximum Relative Humidity:** 90% at 50° C (non-condensing)
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.
Installation Note	Before installing an on-axis light, it is recommended that the listed ambient light filter be installed behind the camera lens. The filter improves image quality by reducing unwanted ambient light. **100 mm models:** 50 x 50 mm suggested field of view and 25 mm minimum suggested stand off **50 mm models:** 25 x 25 mm suggested field of view and 25 mm minimum suggested stand off

Dimensions

Housing

Dust Cover
(optional –
see models
table)

Beam Splitter

Diffuser

View with side plate removed

50 mm Models

5.5 mm (0.22")

4X 1/4-20 UNC

29.9 mm (1.18")

87.5 mm (3.44")

29.9 mm (1.18")

3X 1/4-20 UNC

147.8 mm (5.82")

29.6 mm (1.17")

59.3 mm (2.33")

38.1 mm (1.50")

10.9 mm (0.43")

114.5 mm (4.5")

59.8 mm (2.36")

100 mm Models

Wiring Table

On-Axis Light Wire	PresencePLUS Pro Controller Terminal Block	External Power Supply (Strobed)	External Power Supply (Continuous)
Brown	Pin 1, +V (24V dc ±10%)	+V	+V
Blue	Pin 2, -V (dc common)	-V	-V
Black	Pin 4 (strobe)	+5 to 24V dc OFF	-V
		-V ON	

Quick Disconnect Cables

Model	Length	Connection
PKG3M-2	2 m (6.5')	Female Pico-style (8 mm) connector at one end; flying leads at opposite end
PKG3M-4	4 m (13')	
PKG3M-7	7 m (23')	
PKG3M-9	9 m (30')	

Mounting Brackets

SMBP4OAL100	• For use with right-angle or in-line P4 sensors and 100 mm on-axis light • Centers lens on light opening • Black zinc-plated steel • (4) M5 and (4) ¼-20 socket drive, button-head screws included	
SMBP-POAL100	• For use with Pro sensors and 100 mm on-axis light • Centers lens on light opening • Black zinc-plated steel • (4) M5 and (4) ¼-20 socket drive, button-head screws included	
SMBP4OAL50	• For use with right-angle or in-line P4 sensors and 50 mm on-axis light • Centers lens on light opening • Black anodized aluminum and zinc-plated steel • (4) M3 flat head torx, (4) M5 and (4) ¼-20 socket drive, button-head screws included	

SMBP-POAL50	• For use with Pro sensors and 50 mm on-axis light • Centers lens on light opening • Black zinc-plated steel • (4) M5 and (4) ¼-20 socket drive, button-head screws included	

Refer to your current Banner Sensors catalog for more mounting bracket options. Bracket dimensions can be found at www.bannerengineering.com.

Warranty: Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture found to be defective at the time it is returned to the factory during the warranty period. This warranty does not cover damage or liability for the improper application of Banner products. This warranty is in lieu of any other warranty either expressed or implied.