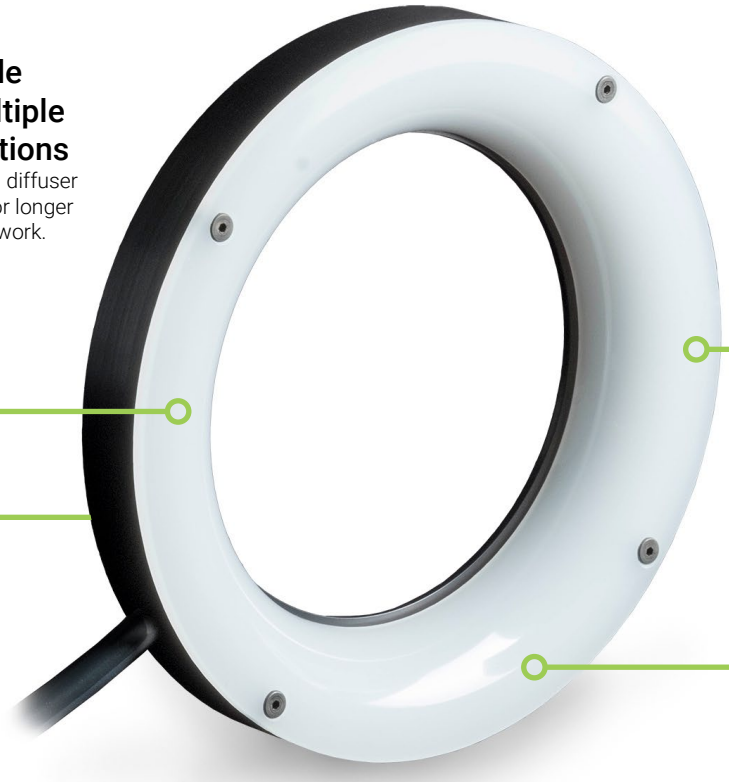
DF198

MicroBrite™ Diffuse Ring Light Series
Product Datasheet

ADVANCED ILLUMINATION by Exaktera

Diffuse Multi-Angle Illumination with Multiple Working Distance Options
High Intensity LEDs with a curved diffuser allowing for close-up Dark Field or longer working distance Bright Field work.

High Power LEDs
Equipped with industrial grade LEDs capable of high output strobe and continuous operation, all while maintaining a long lifespan



M4 Mounting Points
Engineered with four opposing M4 mounting points for highly adjustable positioning

RGB Output Option
Developed specifically for use with Advanced illumination's multi-channel controllers

DF198 Series Description

The MicroBrite DF198 Series Dark Field ring lights are designed to provide diffuse, medium to low angle of incidence illumination when positioned at working distances less than or equal to the light's diameter.

Owing to its curved diffuser, the DF198 Series is also suitable for applications requiring diffuse Bright Field lighting when the light is positioned at working distances longer than its diameter.

The unique combination of 5 available light diameters and a variety of possible working distances offers potential solutions for multiple light geometries and intensity and pattern size on target options in a single light head.

- **Bright Field and Dark Field Illumination**
- **High Intensity**
- **Multiple Sizes Available**
- **RGB Available**
- **1-2 Week BTO Lead Times**

General Information

General Specifications

Category	Specification			Detail	
Optical	Available Wavelengths			WHI, 455nm, 530nm, 625nm, RGB	
	Available Lensing			No Lenses	
	Available Light Conditioning			None	
Electrical	Power Consumption Info			See Power Requirements on Page 10	
	Cable Info			80" -0/+6" Long (2 m -0/+150 mm), -105 °C Rated, Foil Shield w/ Drain	
Mechanical	Sizing Info	Standard	Height	.56" (14.1 mm) to .62" (15.7 mm)	See Page 7 for More Details
			Outer Diameter	1.97" (50.00 mm) to 11.02" (280.0 mm)	
			Inner Diameter	1.24” (31.6mm) to 10.01”(254.3mm)	
	Weight Info (Standard)			~ 0.14 lbs (~63 g) per DF198-050 Unit, ~ 0.28 lbs (~127 g) per DF198-115 Unit, ~ 0.50 lbs (~226 g) per DF198-180 Unit, ~ 0.79 lbs (~358 g) per DF198-280 Unit,	
	Mounting Info			M4 Mounting Holes	
	Material Info			Anodized Aluminum Housing, Acrylic Window, PVC Cable Jacket, Steel Black Oxide Fasteners	
Thermal	Operating Case Temperatures			25 °C to 60 °C	
	Operating Ambient Temperatures			0 °C to 35 °C	
Certification	Compliance			CE, RoHS, IEC 62471	
	IP Rating			IP40	
	Lumen Maintenance - White Only			L70 (50,000 Hours)	

General Information - Continued

Part Number Key

Model	-	Outer Diameter (mm)	Illuminated Field of View (mm)	Connector/Control	-	Alternative Connector
DF198	-	XXX	XX	XX	X	X
DF198		050	455 (royal blue)	C1		M8[1]
		095	530 (green)	C5		M12[1]
		115	625 (red)	IC		
		180	WHI (white)	I3		
		280	RGB (all colors)[3]	I3S		
				24[2]		
more info on page		8	5	10		6

Example Part Numbers:
DF198-100WHII3

[1]Available with IC, I3, I3S, and 24 options only
[2]The 24 version will have a lower output intensity by ~10-15% and operate at a temperature ~10-15% higher than other options; not available in 50 mm outer diameter
[3]Available with C1 connector only

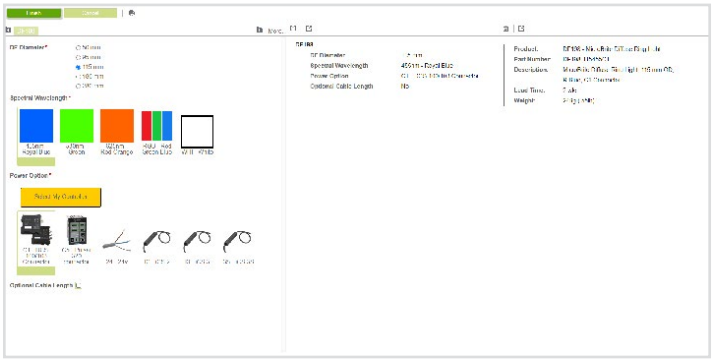
In Stock

Unavailable

Lead Times

Stock products ship within three days.
Build-to-Order custom products ship within one to two weeks.

Configurator

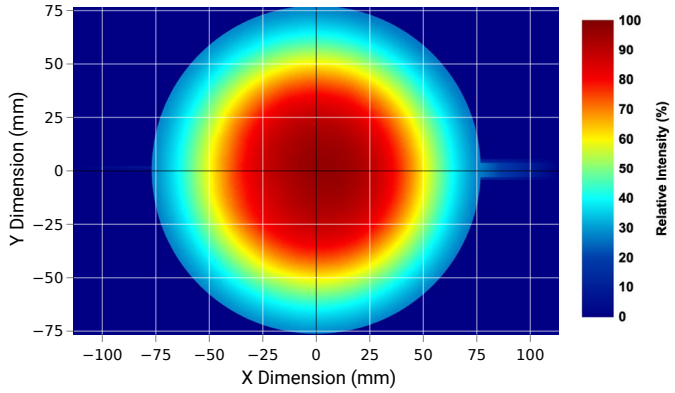


Need a build-to-order custom lighting solution in 2 weeks or less? Advanced Illumination's online configurator helps you tailor our DF198 MicroBrite™ Diffuse Ring Lights to your specific needs. For a guided configuration, visit our online configurator.

Optical Information

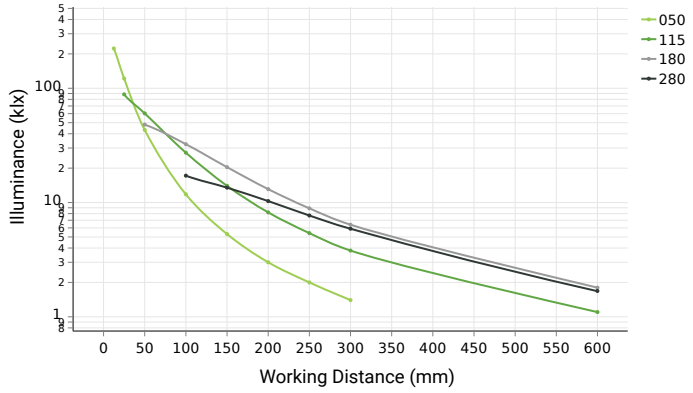
Intensity Characteristics

Intensity Distribution at 50 mm Working Distance



Intensity distribution sample image was taken with a white 115 mm DF198 unit.

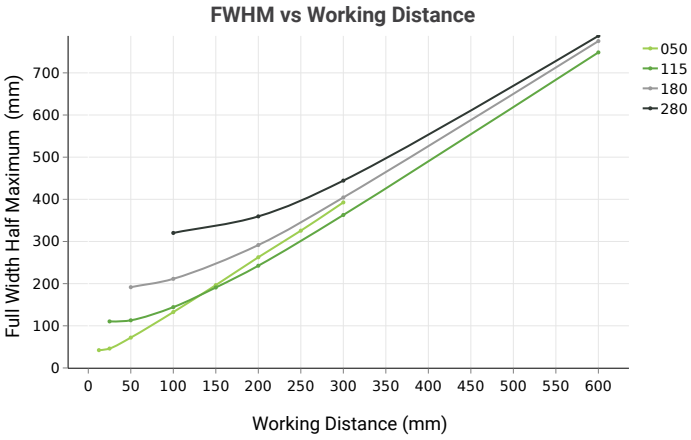
Intensity vs Working Distance



Illuminance data was collected using white DF198 units.

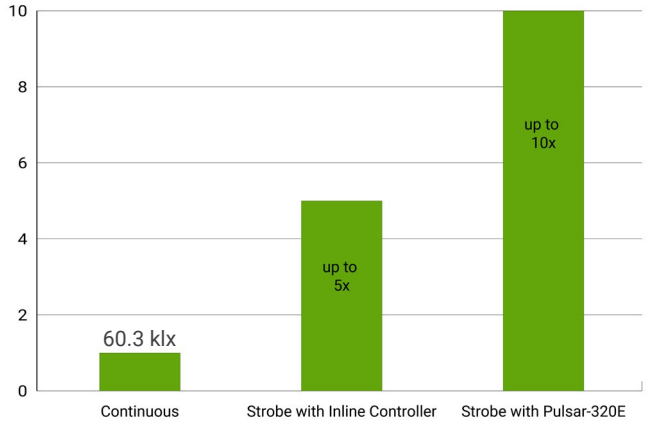
FWHM vs Working Distance

FWHM vs Working Distance



Full Width Half Maximum (FWHM) data collected using white DF198 units of various sizes.

Continuous vs Pulsed Intensity

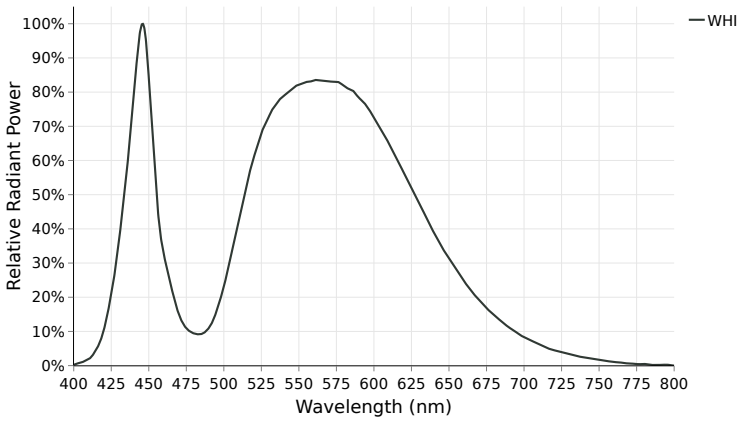


Under continuous operation, a 115 mm white DF198 unit will output an **illuminance of 60.3 klx** and an **irradiance of 190 W/m²** at a 50 mm working distance. For applications that require higher output, the DF198 Series has been engineered to be overdrive strobe capable. When configured with AI's strobe enabled Inline Controller (ICS-3 and ICS-3S), the DF198 is capable of outputting up-to 5X continuous levels. When configured with a C5 connector, compatible with AI's Pulsar 320, a **DF198 can be strobed up-to 10X continuous intensity levels.**

Disclaimer: The measurements provided above are for approximations only and may vary depending on the method of measurement and the specific configuration being measured.

Optical Information - Continued

White Spectral Profile

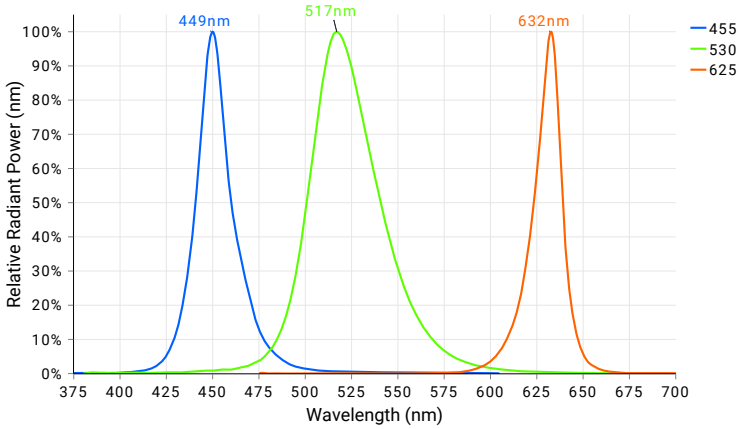


White LED illumination is the most commonly used machine vision lighting configuration. It is often the default choice when specific features of interest do not require color-based highlighting. However, white LEDs can vary in color temperature, which can impact machine vision systems, specifically when matching white light sources.

The DF198 Series white LEDs have a relatively neutral color correlated temperature (CCT) of **5500 K.**

For a more detailed look at the white spectral data, download the csv file of the raw spectral values and refer to our Product Spectra Distribution Charts PDF.

Visible Spectral Profiles



Visible color illumination consists of using wavelengths between 400-700 nm to either create or eliminate contrast on an inspection subject based on differences in a features color hue. When referring to a color wheel, simply remember the following: like colors reflect and brighten surfaces; conversely, opposing colors absorb and darken surfaces.

The DF198 Series is available in **455 nm, 530 nm, and 625 nm** configurations.

For a more detailed look at the visible color spectral data, download the csv file of the raw spectral values and refer to our Product Spectra Distribution Charts PDF.

Disclaimer: The measurements provided above are for approximations only and may vary depending on the method of measurement and the specific configuration being measured.

Optical Information - Continued

Photobiological Risk Factors

Group	Description	Affected Wavelengths (nm)
Exempt	No Photobiological Hazard	N/A
Group 1	No Photobiological hazard under normal behavioral limitations	455, 530, 625, WHI, RGB
Group 2	Does not pose a hazard due to aversion response to bright light or thermal discomfort	N/A

Advanced Illumination's lighting products have been tested and classified to IEC standards by accredited testing services. For more information on photobiological risk factors, please view the following PDF: https://www.advancedillumination.com/wp-content/uploads/2019/04/IEC-040119.pdf

Cleaning Guidelines

To clean our light's optics, it is best to only clean when necessary. Dusting is always the first step in cleaning your optics. Wiping a dusty optic is like cleaning it with sandpaper. So always dust with a canned air duster or compressed and filtered air before wiping any optic. If the dusted optic has no visible stains after you dust it, then remember: "If it's not dirty, don't clean it." Avoid wiping optics when possible.

If dusting did not clean the lens or the lens has stains, use only de-ionized water and mild dish soap with a low lint cloth designed for optics to avoid damage to the optic by any harsh chemicals.

Polarizers, beam splitters and collimated films should never be wiped with any type of cloth or solvent, only use the air dusting method to clean these types of optics.

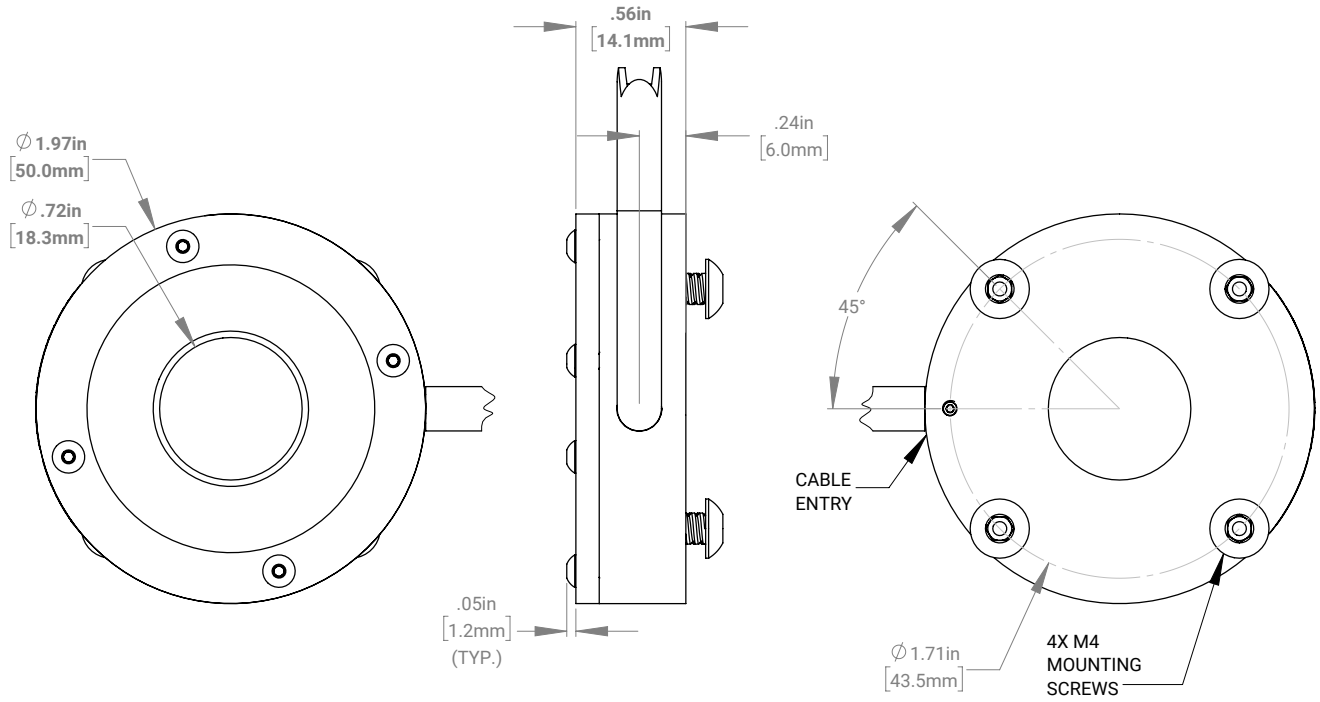
The aluminum housing can be wiped down when dusting is not a sufficient means to thoroughly clean.

Disclaimer: The measurements provided above are for approximations only and may vary depending on the method of measurement and the specific configuration being measured.

Mechanical Information

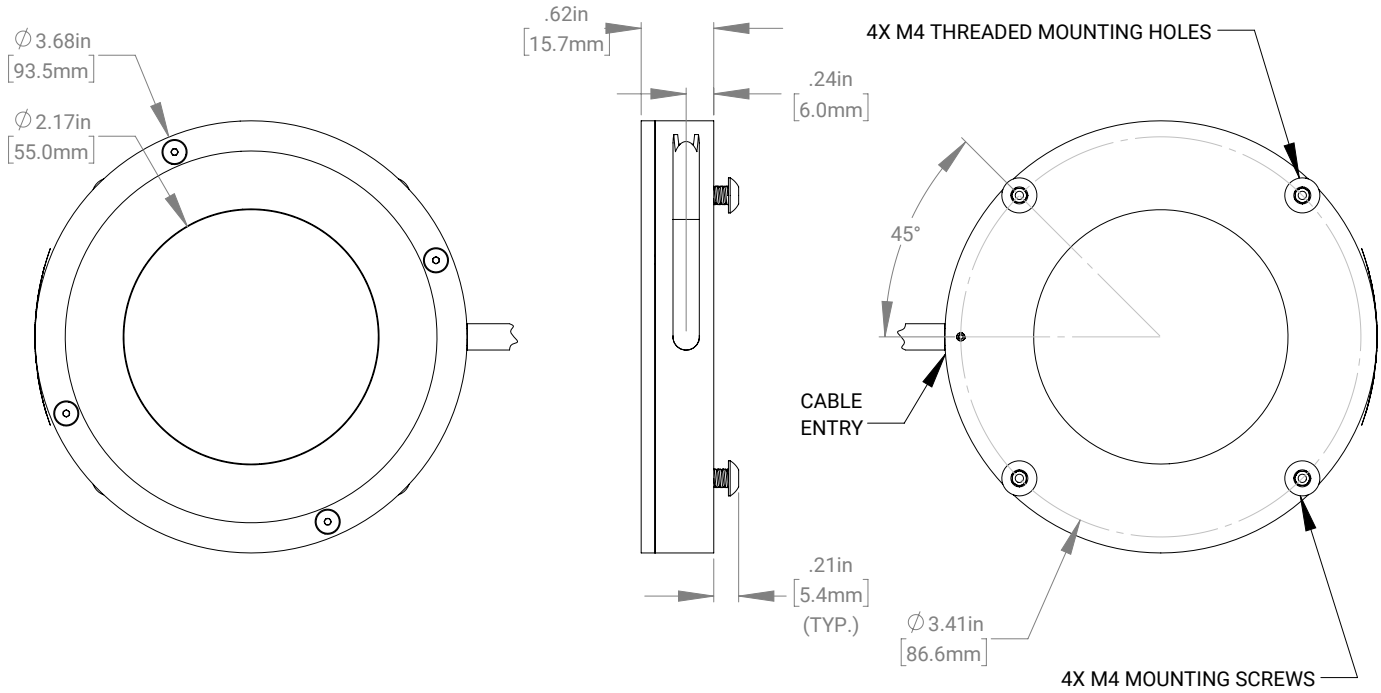
Installation Drawings

DF198-050



For full installation drawings and complete CAD models of this configuration, please visit the downloads section of the product webpage.

DF198-095

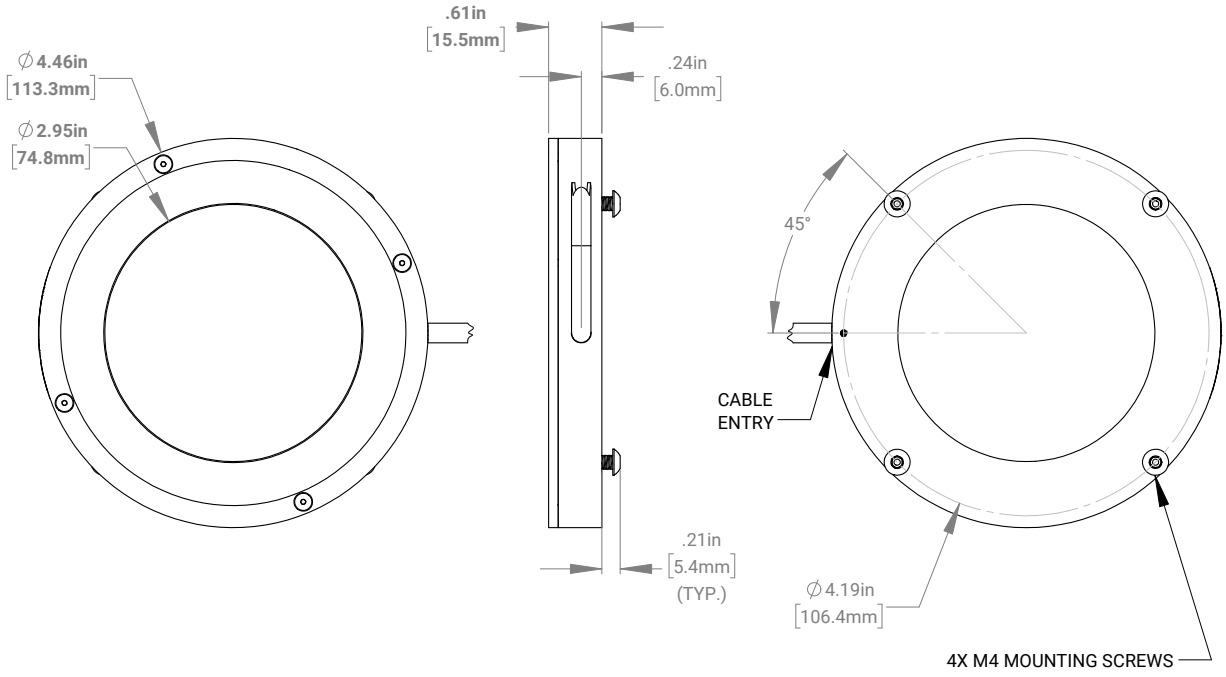


For full installation drawings and complete CAD models of this configuration, please visit the downloads section of the product webpage.

Mechanical Information

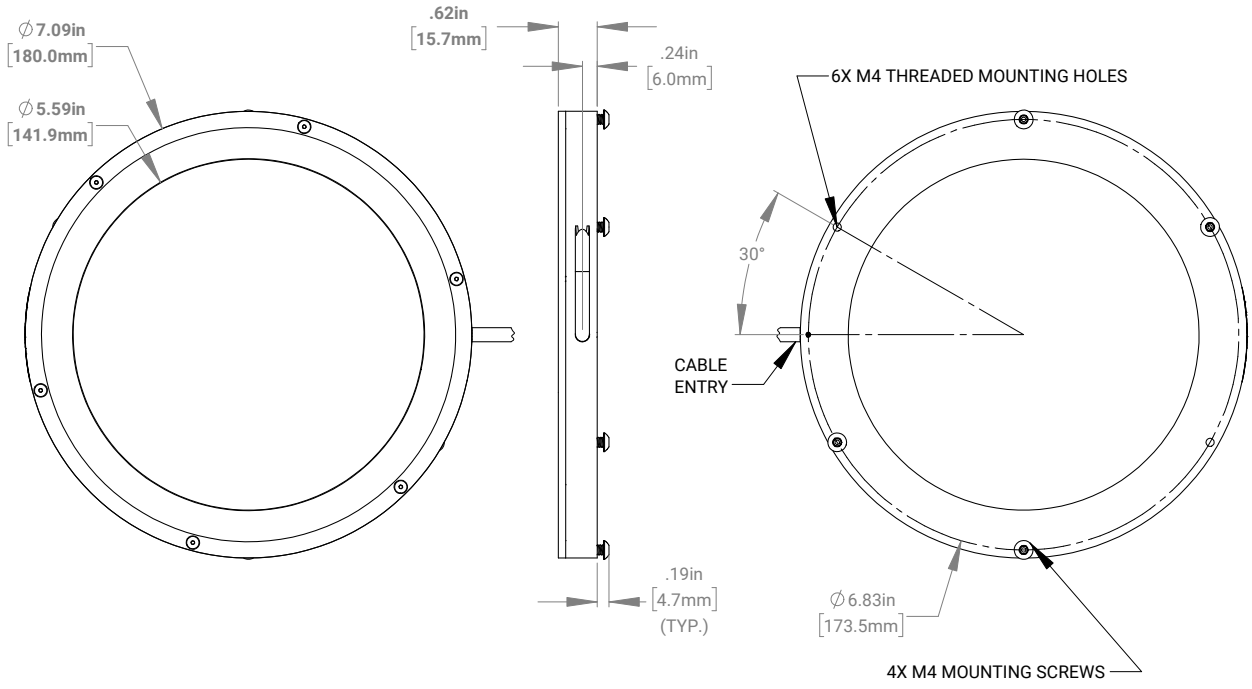
Installation Drawings

DF198-115



For full installation drawings and complete CAD models of this configuration, please visit the downloads section of the product webpage.

DF198-180

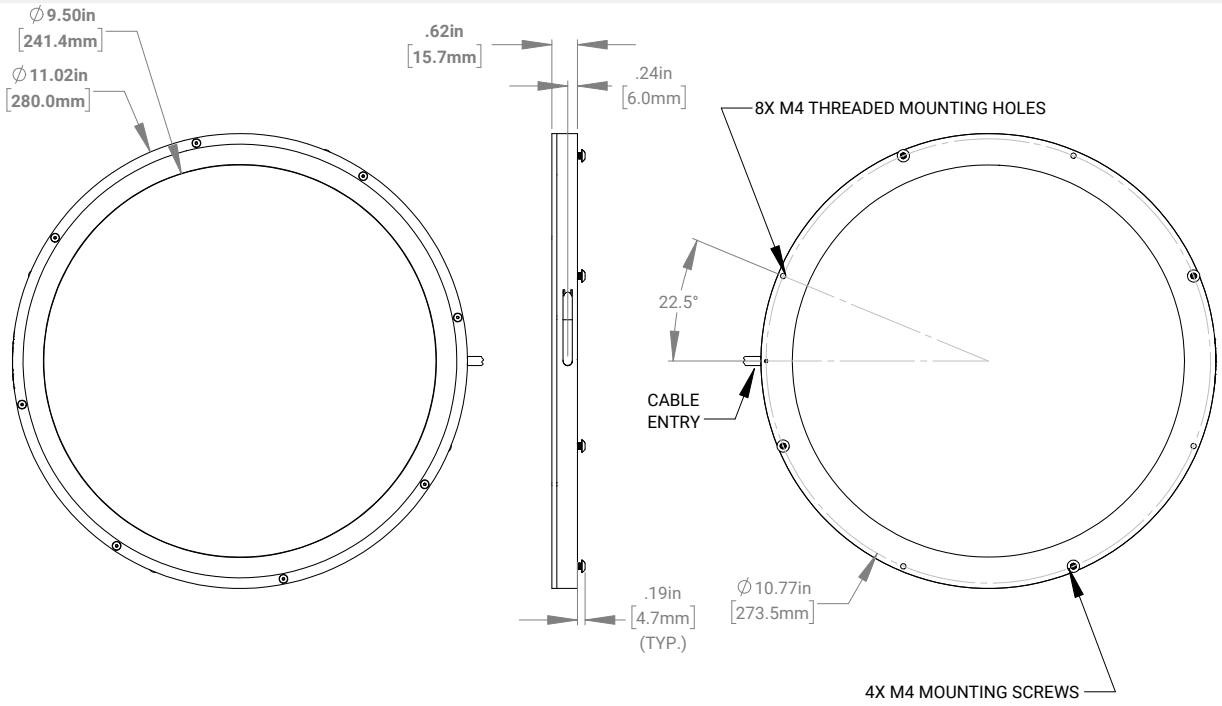


For full installation drawings and complete CAD models of this configuration, please visit the downloads section of the product webpage.

Mechanical Information

Installation Drawings

DF198-280



For full installation drawings and complete CAD models of this configuration, please visit the downloads section of the product webpage.

Electrical Information

Power Requirements

Current Required for Power Supply Sizing

Part Number	Wavelengths (nm)	Configured w/ 24V Driver	Configured w/ Standard Controller (C1, C5, IC, I3, I3S)
DF198-050	625	N/A	0.13 A Max
DF198-050	455, 530, WHI	N/A	0.22 A Max
DF198-050	RGB	N/A	0.65 A Max
DF198-115	625	0.32 A	0.32 A Max
DF198-115	455, 530, WHI	0.32 A	0.54 A Max
DF198-115	RGB	N/A	0.95 A Max
DF198-180	625	0.64 A	0.58 A Max
DF198-180	455, 530, WHI	0.64 A	0.97 A Max
DF198-180	RGB	N/A	2.55 A Max
DF198-280	625	0.96 A	0.58 A Max
DF198-280	455, 530, WHI	0.96 A	0.97 A Max
DF198-280	RGB	N/A	3.60 A Max

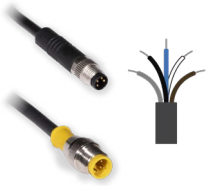
Note: All Advanced Illumination lights and controllers are nominally powered by 24V DC unless otherwise noted. Strobe overdriving with controller based models may require more current and voltage overhead. The values above do not include background current draw from the controller (~100 mA total).

Control Options

Controller Image	Controller Details	Connector Image
	**DCS Single Output Controller - Compatible with C1 Configurations** *PN: DCS-100E* The DCS-100E is a compact, din-rail mounted general-purpose external controller with one C1 output connector, wired with three channels. Capable of providing single channel control or multi-channel control for RGB compatible lights. **Output Power:** 90 W Max Continuous, 540 W Max Pulsed (Overdrive Strobe) **Output Current:** 4.5A Max Continuous, 15 A Max Pulsed **I/Os:** 3 External Trigger Inputs **Interface:** 10/100 Ethernet with Software and browser-based GUIs. SDKs are also available. For more information about our DCS-100E, please visit the controller product page.	
	**DCS Triple Output Controller - Compatible with C1 Configurations** *PN: DCS-103E* The DCS-103E is a din-rail mounted general-purpose multi-light controller with three C1 output connectors. Capable of driving three lights in sync or asynchronously. **Output Power:** 30 W Max Continuous / Output, 180 W Max Pulsed / Output **Output Current:** 1.5A Max Continuous / Output, 5 A Max Pulsed / Output **I/Os:** 3 External Trigger Inputs **Interface:** 10/100 Ethernet with Software and browser-based GUIs. SDKs are also available. For more information about our DCS-103E, please visit the controller product page.	

Electrical Information - Continued

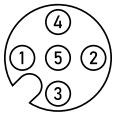
Control Options - Continued

Controller Image	Controller Details	Connector Image
	**Pulsar 320E High Current Controller - Compatible with C5 Configuration** *PN: Pulsar 320E* The Pulsar 320E is a high-power, dual output, pulse-only controller geared for overdriving driving lights at very short flash durations with very high current. **Output Power:** 2500 W Max Pulsed / Output **Output Current:** 50 A Max Pulsed / Output I**/Os:** 2 External Trigger Inputs **Interface:** 10/100 Ethernet with Software GUI. SDKs are also available. For more information about our Pulsar 320E, please visit the controller product page.	
	**Inline Controller - Continuous Only - IC Configurations** *PN: N/A* The IC is an inline, cable-mounted continuous-only controller configured/wired directly for the ordered light head. **Output Power:** 25 W Max Continuous **Output Current:** 1.25 A Max Continuous **I/O:** 1 0-10 V Analog Dimming Input **Interface:** Direct Cable (flying leads or optional connector) For more information about our IC Controller please visit the controller product page.	
	**Inline Controller - Strobe and Continuous - I3 & I3S Configurations** *PN: N/A* The I3 and I3S are inline, cable-mounted continuous and pulse (overdrive strobe) capable controllers configured/wired directly for the ordered light head. When operated in pulsed mode, the I3 is a default-on device on power up, whereas the I3S is default-off, requiring a trigger to illuminate. **Output Power:** 25 W Max Continuous, 125 W Max Pulsed **Output Current:** 1.25 A Max Continuous, 8 A Max Pulsed (Load Dependent) **I/Os:** 1 Gated Trigger Signal, 1 0-10 V Analog Dimming Input **Interface:** Direct Cable (flying leads or optional connector) For more information about our I3/I3S Controller, please visit the controller product page.	

Electrical Information - Continued

Inline Control Option Wiring Information

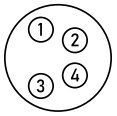
Standard Flying Lead and Optional M12 Connector Pinout Functions

Pin (M12)	Wire Color	24V Functions	IC Functions	I3/I3S Functions	M12 Pinout
1	BROWN	24V DC	24V DC	24V DC	
2	WHITE	N/A	0-10V Analog Control	Reserved	
3	BLUE	DC GND	DC GND	DC GND	
4	BLACK	N/A	Gate Low	PNP/Active High Trigger	
5	GRAY	N/A	N/A	0-10V Analog Control	

5-Position Male Connector

The functions above are only applicable when ordering an 24, IC, I3, I3s, or I4 power configuration with our without an M12 connector. For more wiring information pertaining to strobing and dimming functionality, please download the controller manuals and datasheets.

Optional M8 Connector Pinout Functions

Pin (M12)	Wire Color	24V Functions	IC Functions	I3/I3S Functions	M8 Pinout
1	BROWN	24V DC	24V DC	24V DC	
2	WHITE	N/A	0-10V Analog Control	Reserved	
3	BLUE	DC GND	DC GND	DC GND	
4	BLACK	N/A	Gate Low	Active High Trigger	

4-Position Male Connector

The functions above are only applicable when ordering an 24, IC, I3, or I3s power configuration with our without an M8 connector. For more wiring information pertaining to strobing and dimming functionality, please download the controller manuals and datasheets.

Accessories

Category	Accessory Image	Accessory Detail
Power Supply		**24 Volt DC Power Supply** *PN: PS24-TL* This convenient power source is a universal AC input switching power supply with a regulated output DC current. The power supply comes with an LED Power Indicator, tinned leads marked Positive (+) and Negative (-) and 2 WAGO connectors for simplified assembly. For more information about our 24 Volt DC Power Supply, please visit this webpage.
Dimmer		**Manual Dimming Accessory for the IC, I3 and I3s** *PN: DCS-MP* The DCS-MP is a 30-position potentiometer, detented for precision level control and provides repeatable dimming with cable inline controllers. Features include DIN-rail mountable, a flip up cover to prevent accidental adjustments, spring clamp wiring terminal for flying leads or an M12 connector for use with the IC or I3/I3S Inline Controllers. For more information about our Manual Dimming Accessory please visit this webpage.
Dimmer		**Manual Dimming Accessory for the IC** *PN: MP-ICS* The MP-ICS is a dimmer which is designed for use on lights with the IC Inline Controller. This unit provides for 0 – 100% intensity control. It is NOT COMPATIBLE with LLI37, BLI38, LLI67, and BLI68 "IC" Lights or lights built with the "24v controller" option. For more information about our Manual Dimming Accessory, please visit this webpage.

Accessories - Continued

Category	Accessory Image	Accessory Detail
Extension Cable		**DCS-100E/103E Extension Cable, Single Light Power Cable - C1 Configuration** *PN: LC-XX-S* This extension cable was designed for applications requiring power cables longer than the standard 2 meters provided with Ai lights. This single light cable features a single male and single female 7 pin locking connector (C1) and can be purchased in 3 - 15-meter lengths. For more information about our DCS-100E/103E Extension Cable, Single Output, please visit this webpage.
Extension Cable		**DCS-100E/103E Extension Cable, Dual Light Power Cable - C1 Configuration** *PN: LC-XX-Y* This extension cable was designed for applications requiring two identical lights to be powered through a single controller. These Y cables feature a single male and dual female 7 pin locking connectors (C1) and can be purchased in 3 - 15-meter lengths. See attached spec sheet for compatible light configuration. For more information about our DCS-100E/103E Extension Cable, Split Output, please visit this webpage.
Extension Cable		**Pulsar 320E Extension Cable - C5 Configuration** *PN: LC-XX-S-C5* This extension cable was designed for applications requiring power cables longer than the standard 2 meters provided with Ai lights. This single light cable features a single male and single female Pulsar 320 connector (C5) and can be purchased in 3 - 15 meter lengths. For more information about our Pulsar 320E Extension Cable, please visit this webpage.
Adaptor Cable		**Cognex Gen2 Inline Controller Adaptor Cable** *PN: AD-I3-CGX2* This cable adaptor is for connecting I3/I3S configured lights with Cognex Gen2 Cameras, and comes with a male to female M12 connectors. For more information about our Cognex Gen2 Inline Controller Adaptor Cable, please visit this webpage.
Filters		**Camera Lens Band Pass FIlters** *PN: BPXXX-YYY* Eliminating all but a narrow band of light (+/- 40nm) centered on the specified wavelength, band pass filters are used to enhance colors, or to stop unwanted ambient light from reaching the camera. Filtering can replace existing shrouds, simplifying the physical set up of an inspection site. Ai offers 635nm and 660nm band pass filters to fit several different lens sizes. For more information about our Camera Lens Band Pass FIlters, please visit this webpage.

Additional Information

Warranty

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty. No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Compliancy

Our lighting products are designed and tested to meet CE, RoHS, and IEC standards. As a global ISO 9001 certified company, we understand the importance of compliance and perform accelerated testing on every product before shipment. For more information on our compliance standards, please see our compliancy documentation here: https://www.advancedillumination.com/services/compliance-statements/

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

Company Information

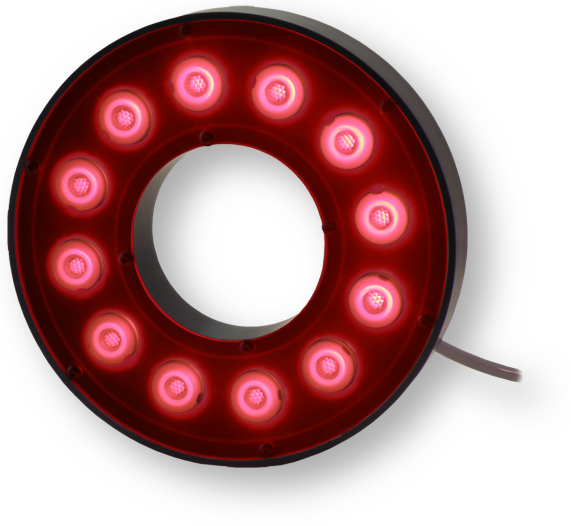
Advanced Illumination
440 State Garage Road, Rochester, VT 05767
Phone: +1 (802) 767 3830
Fax: +1 (802) 767 2636
Email: info@advancedillumination.com
Web: advancedillumination.com

RL113

High Intensity Bright Field

Product Highlights

- The RL113 High Intensity Bright Field ring light offers a very wide array of wavelengths from UV to IR.



General Specifications

Electrical Specifications	Color	24V Current	All Other Controls
	365, 375, 385, 395, 405	0.54 A	0.90 A Max
	590, 625, 660, 730	0.51 A	0.64 A Max
	455, 470, 505, 530, WHI	0.54 A	0.81 A Max
	850, 940	0.51 A	0.80 A Max
Normal Operating Temperature	0 - 60°C		
Weight	725.7g (25.60z)		
Standard Cable Information	2 m long -0/+150 mm (80" -0/+6") - 105°C rated PVC jacket, foil shield with drain		
Photobiological Risk Factor	Exempt Applicable Wavelengths: 850, 940 Line 1.5 Line 2 Line 2 Line 2		
Compliance	CE, RoHS, IEC 6247		
IP Rating	IP67		
Lumen Maintenance	L70 = 50,000 Hours		

Part Number Key

Model	Lens Type	–	Peak Wavelength	Connector/ Control	–	Alternative Connector
RL113	X	–	XXX	XX	–	XXX
RL113	N (Narrow) M (Medium) W (Wide)		365 (UV) 375 (UV) 385 (UV) 395 (UV) 405 (violet) 455 (royal blue) 470 (blue) 505 (cyan) 530 (green) 590 (amber)[2] 625 (red orange)[2] 660 (red) 730 (IR) 850 (IR) 940 (IR) WHI (white)	C1 C5 IC I3 I3S 24		M8[1] M12[1]

EX:
RL113M-470C5
RL113-625I3-M12

[1] Available with IC, I3, I3S, and 24 V options only
[2] Not available with 24 V option

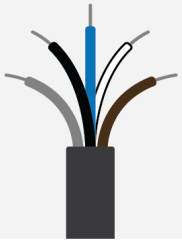
Beam Angle (FWHM):
Narrow = 8°
Medium = 21°
Wide = 29°

See website product page for in-stock product numbers.

Shipping:
Stock Products: within three days
Build-to-Order Products: within one to three weeks

Electrical Specs

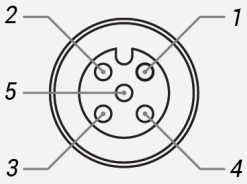
Standard Flying Lead Functions for 24V, IC, I3 and I3S Control Options



COLOR	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
BROWN	24 V DC	24 V DC	24 V DC
WHITE	N/A	0-10 V ANALOG DIMMING	RESERVED
BLUE	DC GND	DC GND	DC GND
BLACK	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
GRAY	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **without** the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.*

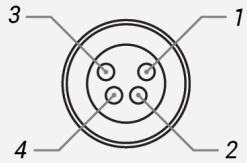
M12 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	RESERVED
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
5	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 5-position Male M12 connector.*

M8 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



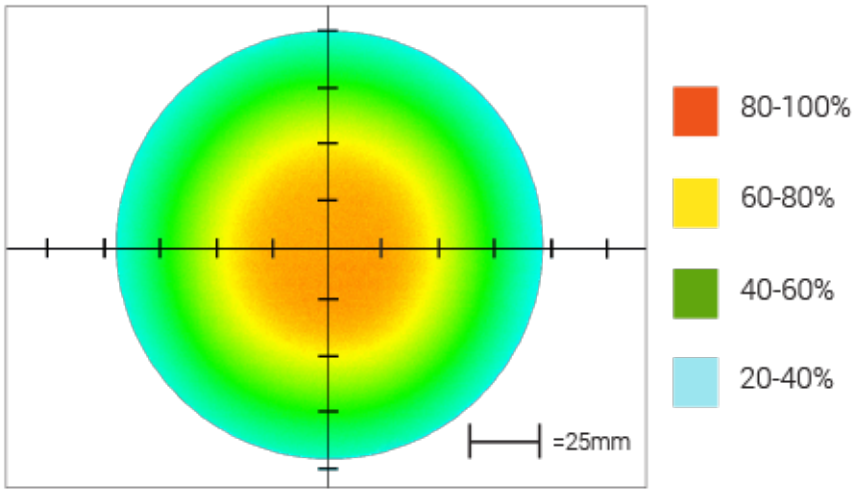
PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 4-position Male M8 connector.*

For details on operating configurations without built-in control (C1, C5, Q1, and Q4 control, when available), please refer to Advanced illumination's controller manuals.

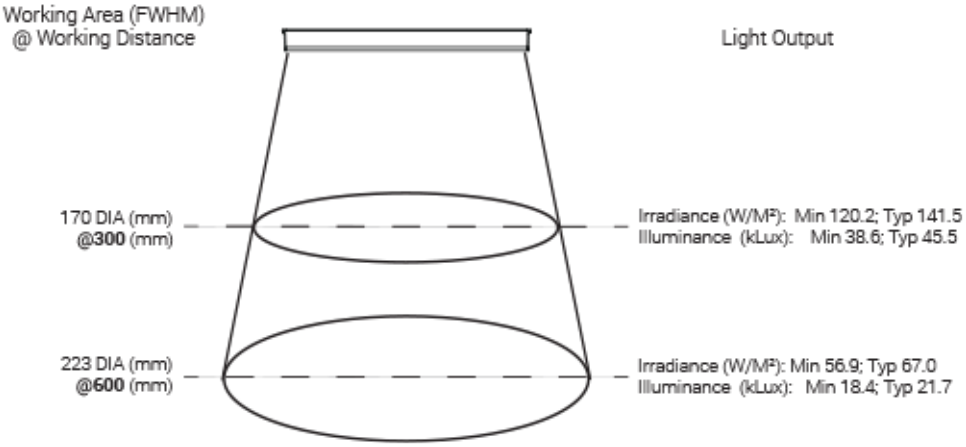
Optical Specs

Intensity Distribution

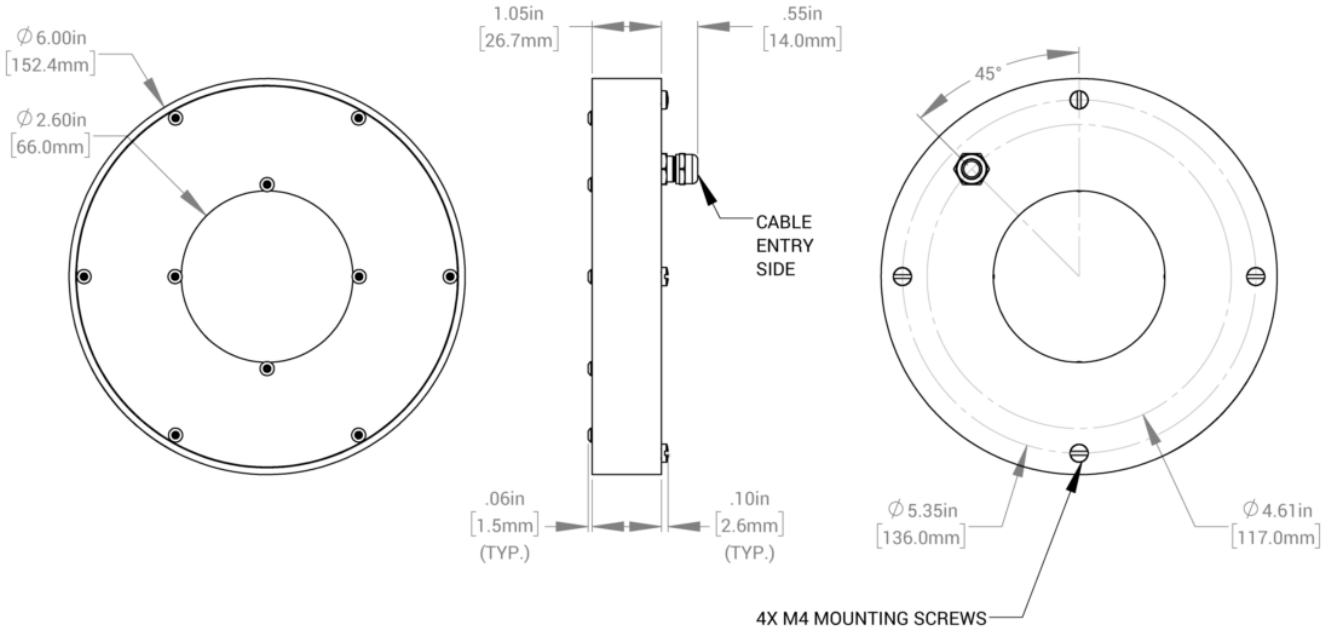


Optical measurement taken using RL113-WHIIC @ 300 mm

Area of Illuminance & Intensity



Mechanical Specs



Control Specs

C1 Connector	C5 Connector	ICS 2 (IC)	ICS 3 (I3)	ICS 3S (I3S)	24
For use with: **DCS Series Controllers**	*For use with:* **Pulsar 320 Strobe Controller.**	Continous in-line controller *Powered with:* **24V power supply**	Combination strobe/continous in-line controller *Powered with:* **24V power supply**	Default-OFF strobe/continous in-line controller *Powered with:* **24V power supply**	Flying/tinned leads *Powered with:* **24V power supply**

Warranty Information

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty.
No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

Company Information

Advanced Illumination
440 State Garage Road, Rochester, VT 05767
Phone: 802.767.3830
Fax: 802.767.2636
Email: info@advancedillumination.com
Web: advancedillumination.com

RL121

Small High Dispersion Bright Field

Product Highlights

- The RL121 is characterized as a Small High Dispersion Bright Field ring light.
- Non-lensed LEDs disperse light at broad angles, providing “soft” lighting for applications that require short working distances.

General Specifications

Electrical Specifications	Color	24V Current	All Other Controls
	365, 375, 385, 395, 405	0.24 A	0.31 A Max
	455, 470, 530, WHI	0.24 A	0.29 A Max
	590, 625	0.12 A	0.29 A Max
	850, 940	0.24 A	0.27 A Max
Normal Operating Temperature	0 - 60°C		
Weight	164g (5.78oz)		
Standard Cable Information	2 m long -0/+150 mm (80" -0/+6") - 105°C rated PVC jacket, foil shield with drain		
Photobiological Risk Factor	Exempt Applicable Wavelengths: 850, 940 Group 1 (Low Risk) Applicable Wavelengths: 455, 470, 530, 590, 625, WHI Group 2 (Moderate Risk) Application Wavelengths: 365, 375, 385, 395, 405		
Compliance	CE, RoHS, IEC 62471		
IP Rating	IP50		
Lumen Maintenance	L70 = 50,000 Hours		

Part Number Key

Model	–	Peak Wavelength	Connector/ Control	Light Conditioning Option	–	Alternative Connector
RL121	–	XXX	XX	X	–	XXX
RL121		365 (UV) 375 (UV) 385 (UV) 395 (UV) 405 (violet) 455 (royal blue) 470 (blue) 530 (green) 590 (amber) 625 (red orange) 850 (IR) 940 (IR) WHI (white)	C1 C5 IC I3 I3S 24	D[2] (Diffuser) P[2] (Polarizer)		M8[1] M12[1]

EX:
RL121-470C5D
RL121-WHI24P-M12

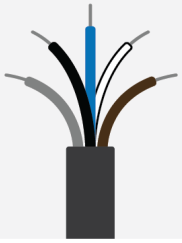
[1] Available with IC, I3, I3S, and 24 V options only
[2] Not available with UV options; 470 (blue) will reduce the life of the polarizer

See website product page for in-stock product numbers.

Shipping:
Stock Products: within three days
Build-to-Order Products: within one to three weeks

Electrical Specs

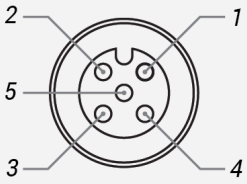
Standard Flying Lead Functions for 24V, IC, I3 and I3S Control Options



COLOR	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
BROWN	24 V DC	24 V DC	24 V DC
WHITE	N/A	0-10 V ANALOG DIMMING	RESERVED
BLUE	DC GND	DC GND	DC GND
BLACK	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
GRAY	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **without** the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.*

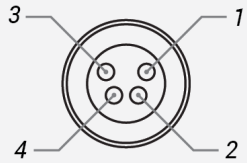
M12 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	RESERVED
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
5	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 5-position Male M12 connector.*

M8 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 4-position Male M8 connector.*

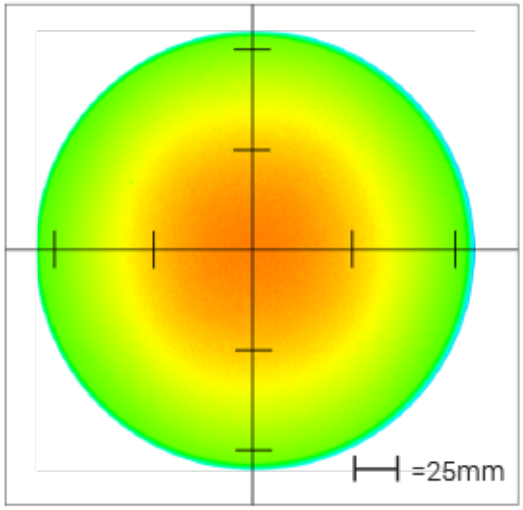
For details on operating configurations without built-in control (C1, C5, Q1, and Q4 control, when available), please refer to Advanced illumination's controller manuals.

Control Specs

C1 Connector	C5 Connector	ICS 2 (IC)	ICS 3 (I3)	ICS 3S (I3S)	24
For use with: **DCS Series Controllers**	*For use with:* **Pulsar 320 Strobe Controller.**	Continous in-line controller *Powered with:* **24V power supply**	Combination strobe/continous in-line controller *Powered with:* **24V power supply**	Default-OFF strobe/continous in-line controller *Powered with:* **24V power supply**	Flying/tinned leads *Powered with:* **24V power supply**

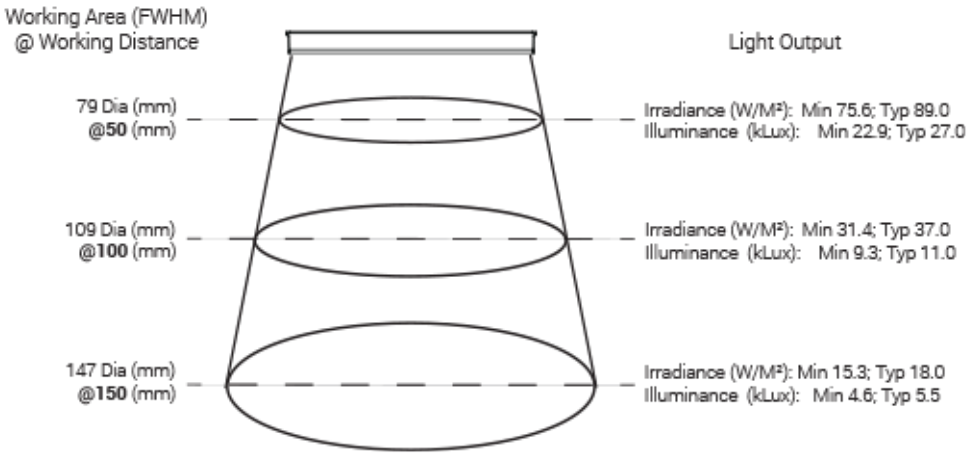
Optical Specs

Intensity Distribution

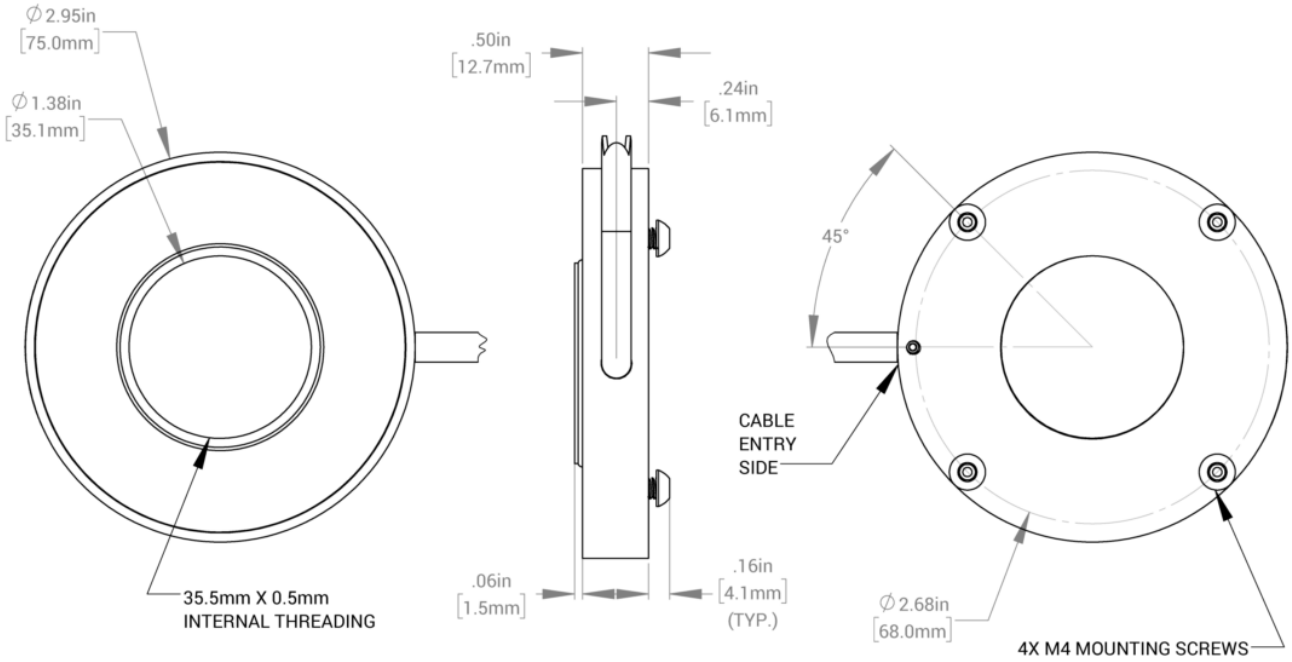


Optical measurement taken using RL121-WHIIC Rev. A @ 100 mm

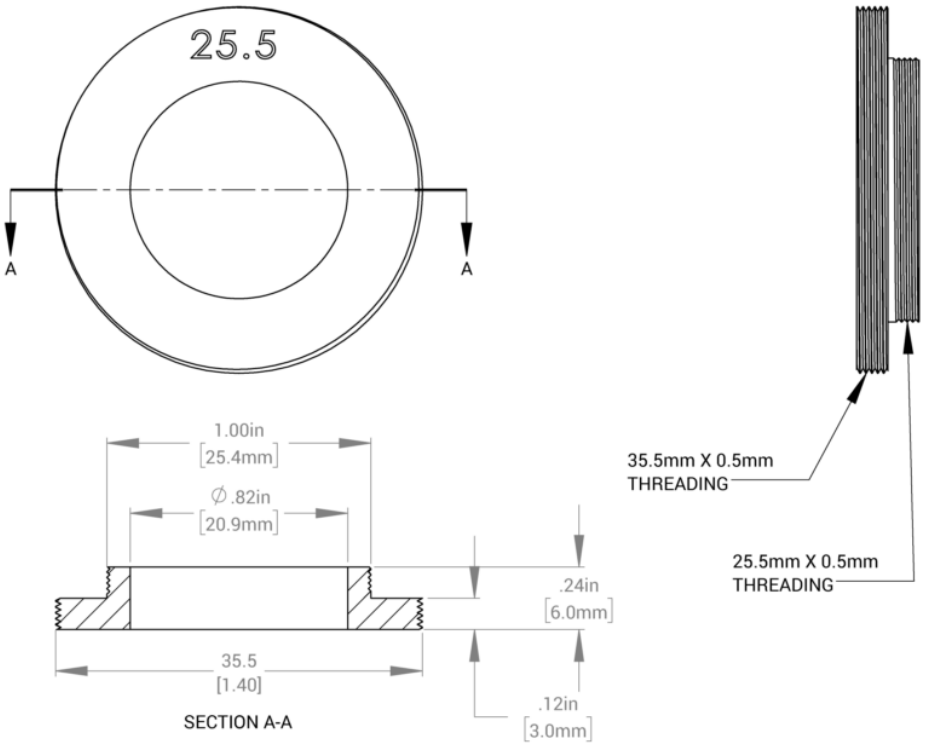
Area of Illuminance & Intensity



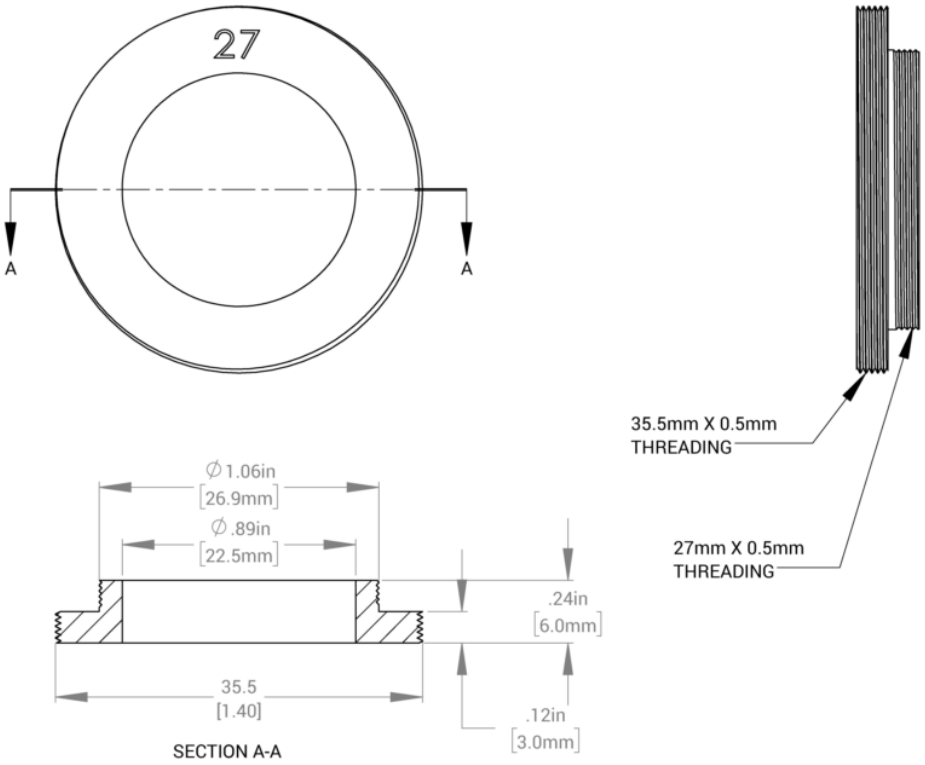
Mechanical Specs



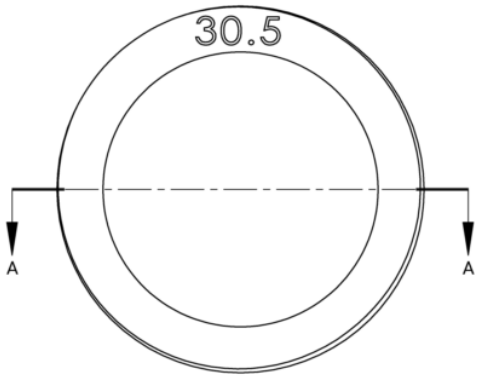
[RL121 TA25.5-35.5 ADAPTER RING]

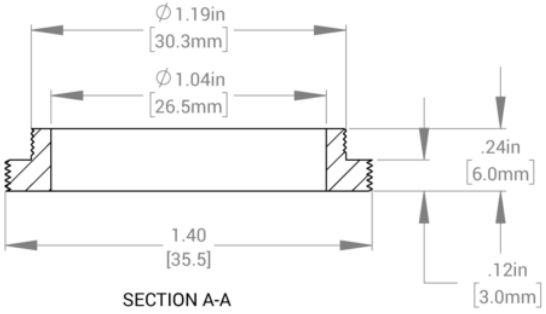


[RL121 TA27-35.5 ADAPTER RING]

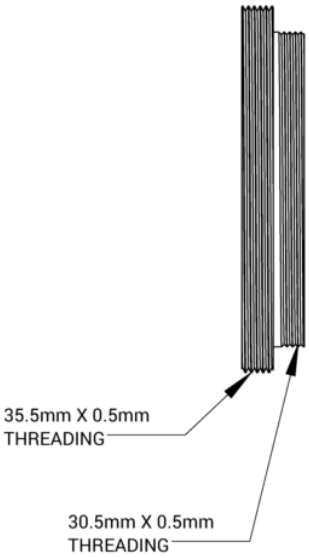


[RL121 TA30.5-35.5 ADAPTER RING]





SECTION A-A



Warranty Information

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty.
No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

Company Information

Advanced Illumination
440 State Garage Road, Rochester, VT 05767
Phone: 802.767.3830
Fax: 802.767.2636
Email: info@advancedillumination.com
Web: advancedillumination.com

RL127

Large High Dispersion Bright Field

Product Highlights

- The RL127 is characterized as a Large High Dispersion Bright Field ring light.
- Non-lensed LEDs disperse light at broad angles, providing “soft” lighting for applications that require short to medium working distances.

General Specifications

Electrical Specifications	Color	24V Current	All Other Controls
	365, 375, 385, 395, 405	0.48A	0.48A Max
	455, 470, 530, WHI	0.48A	0.48A Max
	590, 625	0.24A	0.50A Max
	850, 940	0.48A	0.60A Max
Normal Operating Temperature	0 - 60°C		
Weight	308g (10.9)		
Standard Cable Information	2 m long -0/+150 mm (80" -0/+6") - 105°C rated PVC jacket, foil shield with drain.		
Photobiological Risk Factor	Exempt Applicable Wavelengths: 850, 940 Group 1 (Low-Risk) Applicable Wavelengths: 455, 470, 530, 590, 625, WHI Group 2 (Moderate-Risk) Applicable Wavelengths: 365, 375, 385, 395, 405		
Compliance	CE, RoHS, IEC 62417		
IP Rating	IP67		
Lumen Maintenance	L70 = 50,000 Hours		

Part Number Key

Model	–	Peak Wavelength	Connector/ Control	Light Conditioning Option	–	Alternative Connector
RL127	–	XXX	XX	X	–	XXX
RL127		395 (UV) 375 (UV) 385 (UV) 395 (UV) 405 (violet) 455 (royal blue) 470 (blue) 530 (green) 590 (amber) 625 (red orange) 850 (IR) 940 (IR) WHI (white)	C1 C5 IC I3 I3S 24	D[2] (Diffuser) P[2] (Polarizer)		M8[1] M12[1]

EX:
RL127-470C5D
RL127-WHI24P-M12

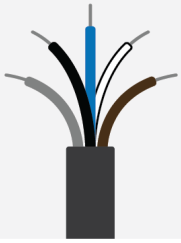
[1] Available with IC, I3, I3S, and 24 V options only
[2] Not available with UV options; 470 (blue) will reduce the life of the polarizer

See website product page for in-stock product numbers.

Shipping:
Stock Products: within three days
Build-to-Order Products: within one to three weeks

Electrical Specs

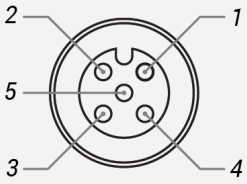
Standard Flying Lead Functions for 24V, IC, I3 and I3S Control Options



COLOR	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
BROWN	24 V DC	24 V DC	24 V DC
WHITE	N/A	0-10 V ANALOG DIMMING	RESERVED
BLUE	DC GND	DC GND	DC GND
BLACK	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
GRAY	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **without** the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.*

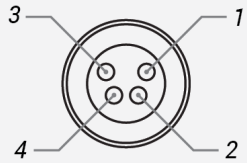
M12 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	RESERVED
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
5	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 5-position Male M12 connector.*

M8 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 4-position Male M8 connector.*

For details on operating configurations without built-in control (C1, C5, Q1, and Q4 control, when available), please refer to Advanced illumination's controller manuals.

Control Specs

C1 Connector	C5 Connector	ICS 2 (IC)	ICS 3 (I3)	ICS 3S (I3S)	24
For use with: **DCS Series Controllers**	*For use with:* **Pulsar 320 Strobe Controller.**	Continous in-line controller *Powered with:* **24V power supply**	Combination strobe/continous in-line controller *Powered with:* **24V power supply**	Default-OFF strobe/continous in-line controller *Powered with:* **24V power supply**	Flying/tinned leads *Powered with:* **24V power supply**

Change Notice

PCN No: 135

Date Issued: September 23, 2016

Notice Type: Product Revision Change

Product Type: RL127

Change Notification Summary

In an effort to improve our products, Advanced illumination (Ai) will update the LEDs used in the RL127 design. This change will result in a brighter, more uniform light. Customers may still buy the current revision of this model until December 16th of 2016. After that time, orders for these products will be converted to their respective RL127 Revison A models.

This LED change will result in additional wavelengths being available: 365nm, 375nm, 385nm, 395nm, 405nm, 455nm, 505nm, 530nm, 590nm, 660nm, 730nm, 850nm and 940nm. Additionally the white LED color temperture will be changing from 6100K to 5000K.

Visable wavelengths will be priced at $790. This will result in price increase on 470, 625 and White colors. All IR wavelengths will be priced at $985 list and UV wavelengths at $1350.

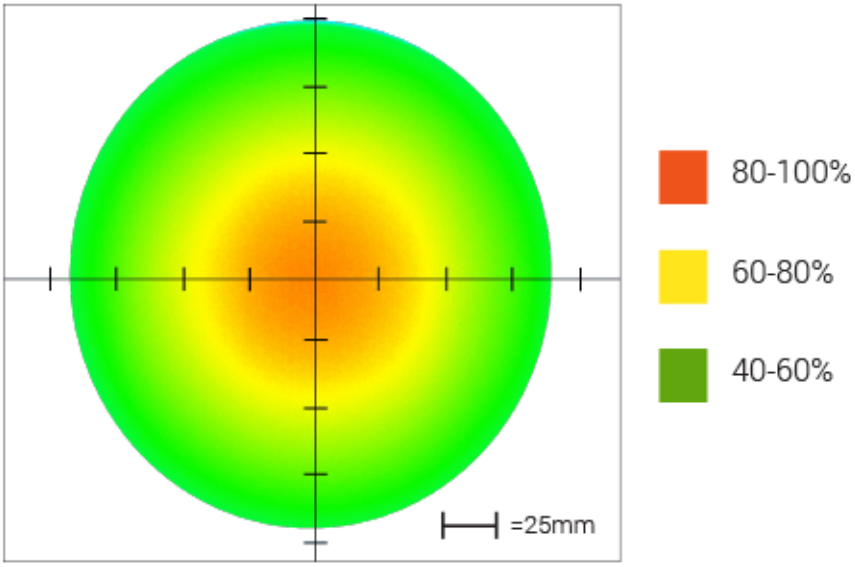
Orders for customized (dash numbers) versions of RL127 will be honored until March 16th of 2017. Ai will be actively working with customers for those products to simplify the transition.

Please contact your Ai Sales Representative if you have any questions.

PCN 135 RL127

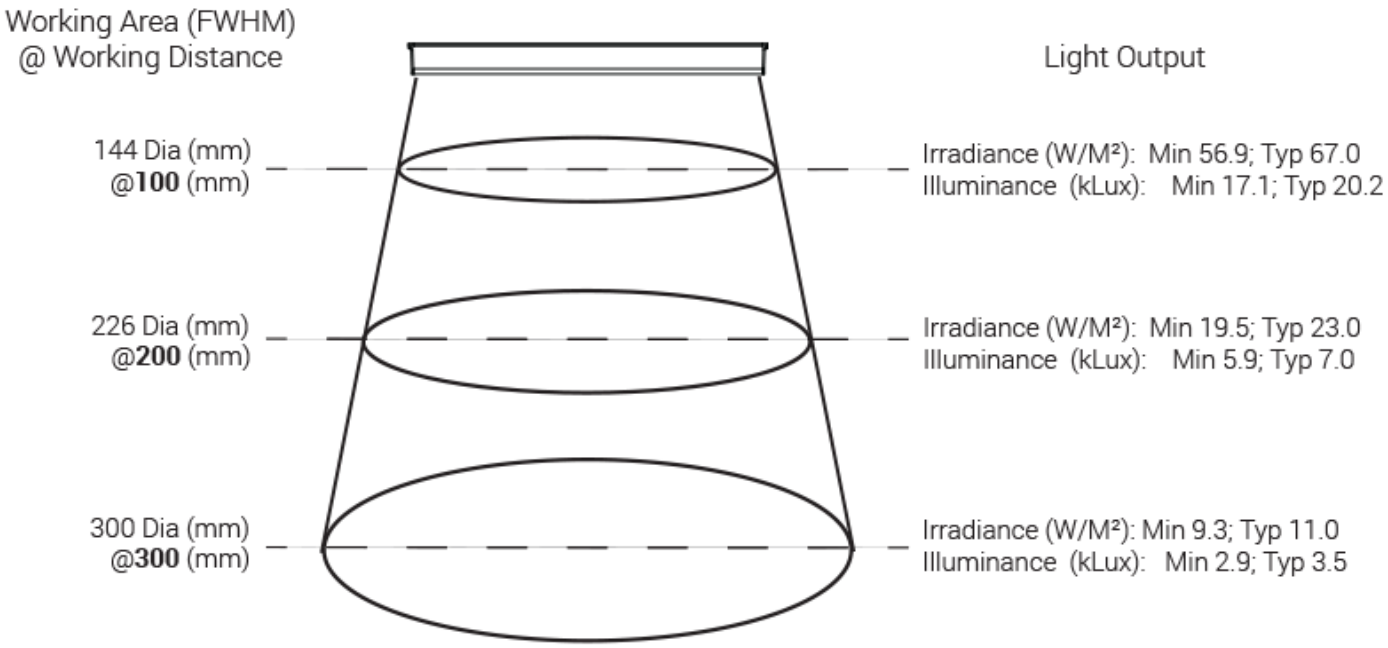
Optical Specs

Intensity Distribution

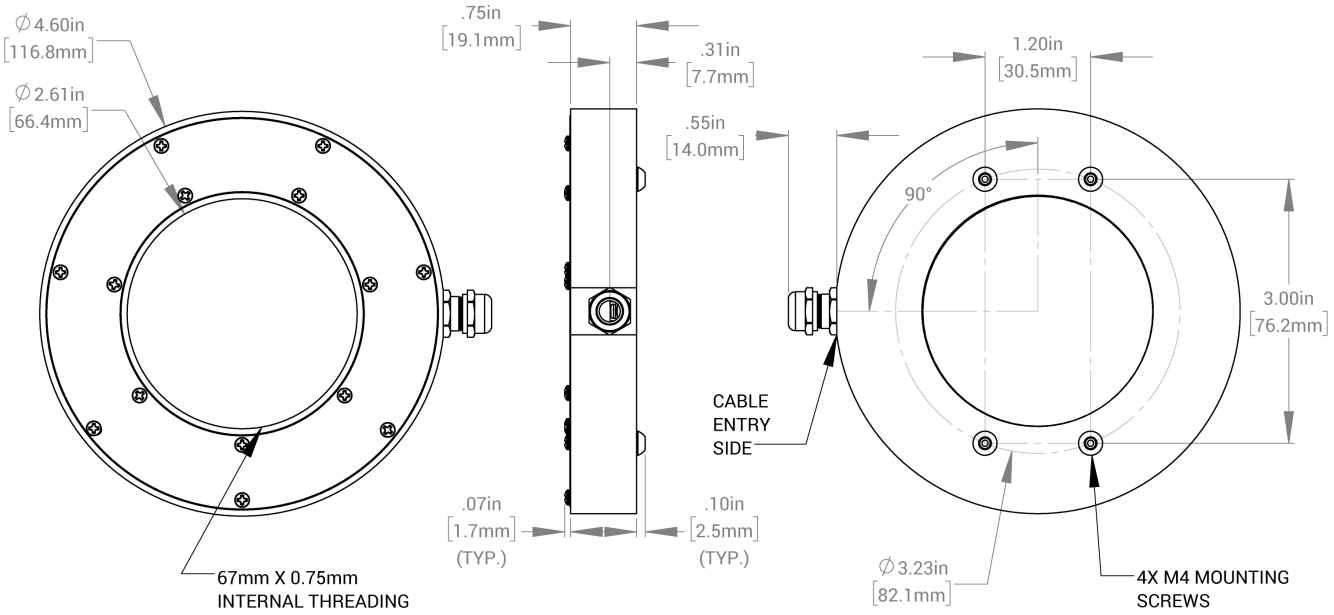


Optical measurement taken using RL127-WHIIC @ 200 mm

Area of Illuminance & Intensity



Mechanical Specs



Warranty Information

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty.
No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

Company Information

Advanced Illumination
440 State Garage Road, Rochester, VT 05767
Phone: 802.767.3830
Fax: 802.767.2636
Email: info@advancedillumination.com
Web: advancedillumination.com

RL1424

Small Aimed Bright Field

Product Highlights

- The RL1424 is characterized as a Small Aimed Bright Field ring light.
- Precisely aimed LEDs provide a level of lighting control not found in traditional illuminators.

General Specifications

Electrical Specifications	Color	24V Current	All Other Controls
	625, 660, 880	0.06A	0.06A Max
	395, 470, 520, WHI	0.04A	0.04A Max
Normal Operating Temperature	0 - 60°C		
Weight	128.82g (4.54oz) for standard mounting option		
Standard Cable Information	2 m long -0/+150 mm (80" -0/+6") - 105°C rated PVC jacket, foil shield with drain.		
Photobiological Risk Factor	Exempt Applicable Wavelengths: 880 Group 1 (Low-Risk) Applicable Wavelengths: 470, 520, 625, 660, WHI Group 2 (Moderate-Risk) Applicable Wavelengths: 395		
Compliance	CE, RoHS, IEC 62471		
IP Rating	IP40		
Lumen Maintenance	L70 = 50,000 Hours		

Part Number Key

Model	Mounting Options	–	Peak Wavelength	Stand Off (mm)	Illuminated Field of View (mm)	Connector/ Control	Light Conditioning Option	–	Alternative Connector
RL1424	X	–	XXX	XXX	XXX	XX	X	–	XXX
RL1424	S (Standard) B[4] D[4]		395 (UV)[2] 470 (blue) 520 (green) 625 (red orange) 660 (red) 880 (IR) WHI (white)	See chart to compute stand off	XS S M L XL XXL	C1 C5 IC I3 I3S 24	D (Diffuser) P[3] (Polarizer)		M8[1] M12[1]

EX:
RL1424B-395100XXLC1D
RL1424D-625200XLI3P-M12

[1] Available with IC, I3, I3S, and 24 V options only
[2] Not available with IC and 24 V options
[3] Not available with 395 (UV) option; 470 (blue) will reduce the life of the polarizer
[4] See Mechanical Specs for details on mounting options

See website product page for in-stock product numbers.

Shipping:
Stock Products: within three days
Build-to-Order Products: within one to three weeks

Change Notice

PCN No: 166

Date Issued: May 5, 2023
Notice Type: Product Change
Product Type: 660nm Wavelength on traditional 5mm Lights Discontinuation

Change Notification Summary

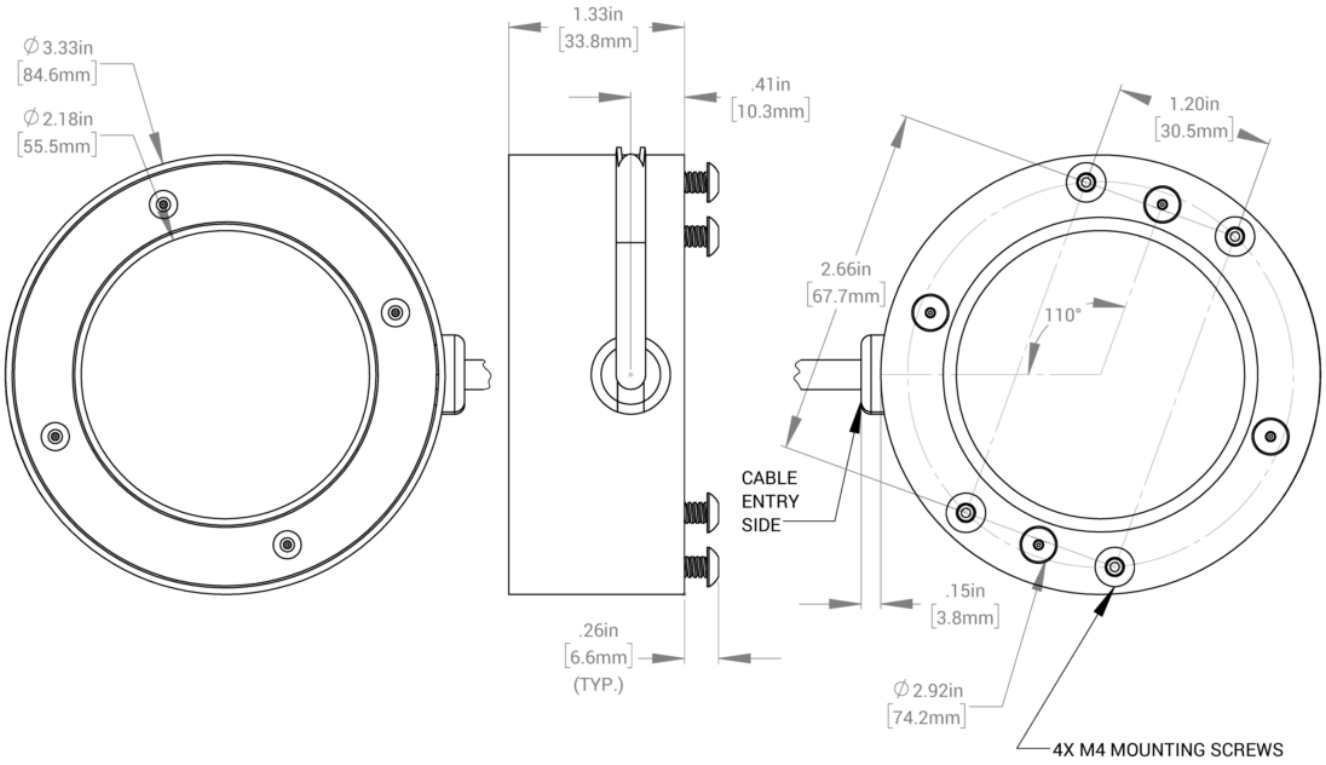
Advanced illumination (Ai) will be ending the manufacture of the 660nm color option on our classic aimed lights due to the LEDs being discontinued from the manufacturer. We expect to have six months of inventory to fulfill orders, after that we suggest purchasing the same light but with the 625nm wavelength.

Please contact your Ai Sales Representative if you have any questions.

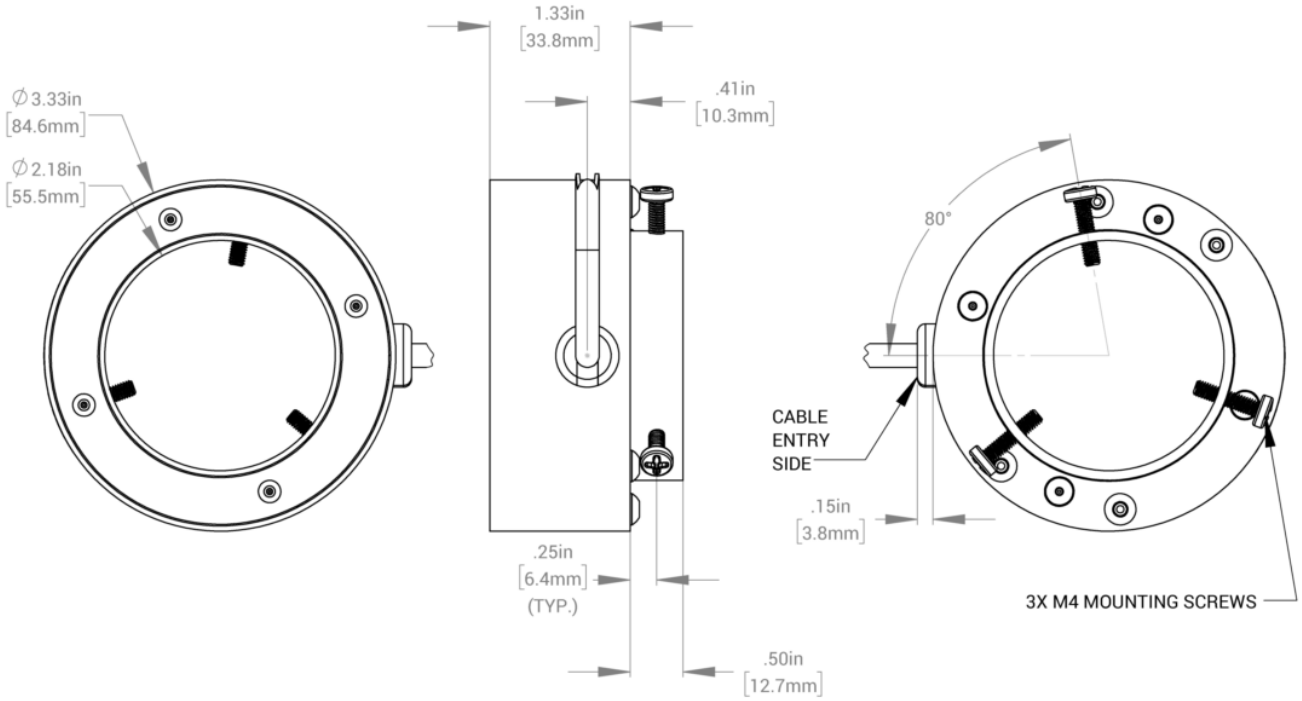
PCN 166

Mechanical Specs

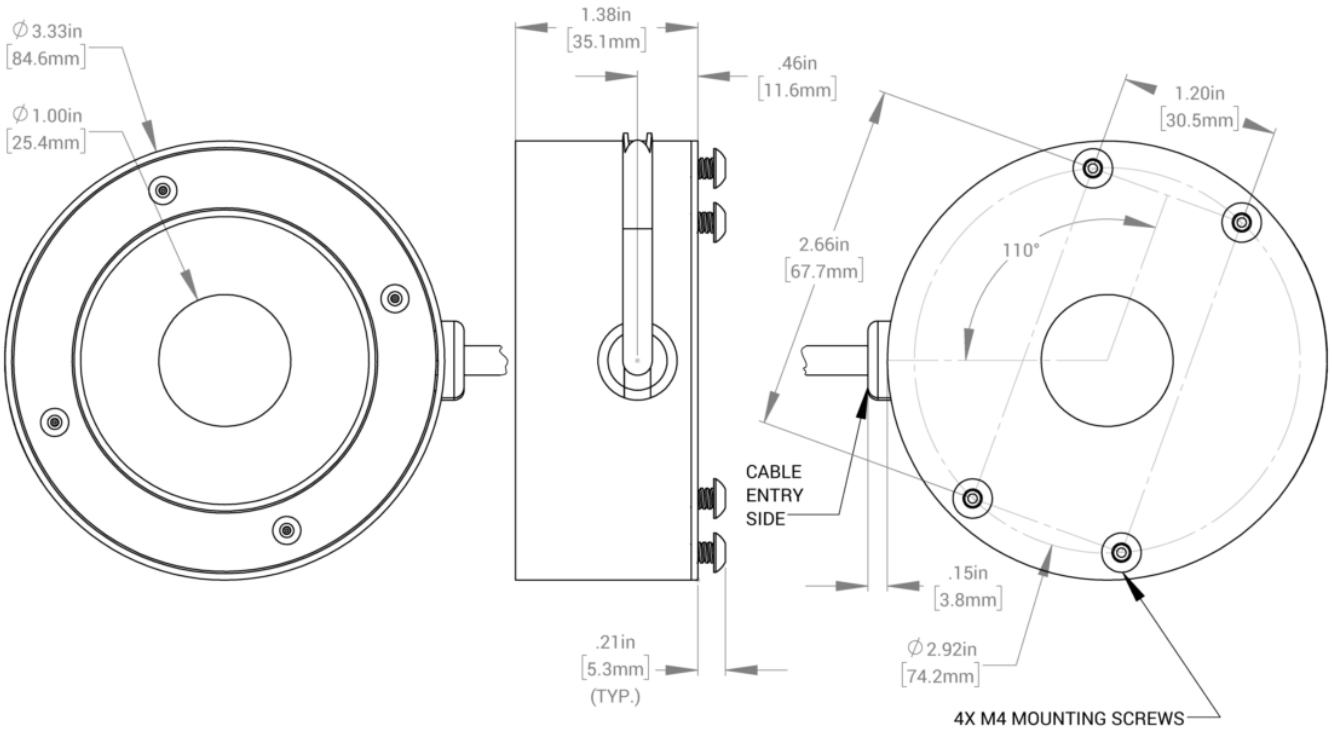
[RL1424 - STANDARD BARREL OPTION]



[RL1424 - BARREL OPTION B]

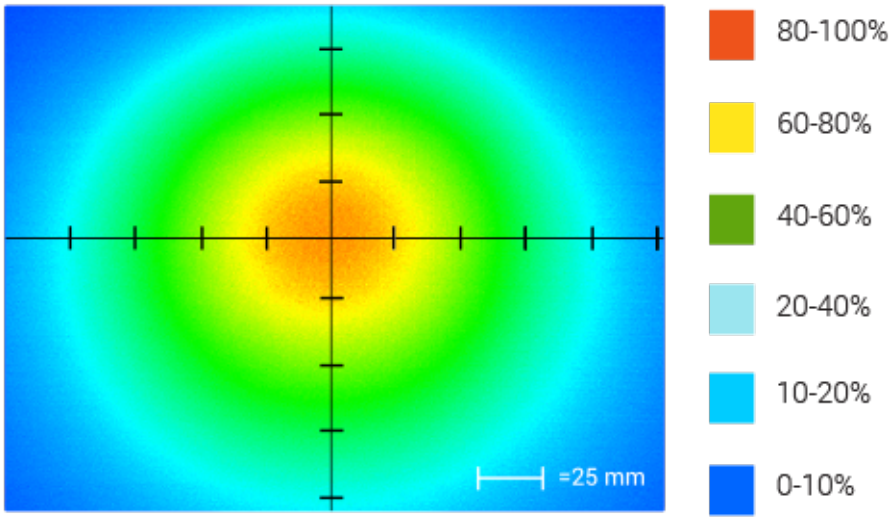


[RL1424 - BARREL OPTION D]



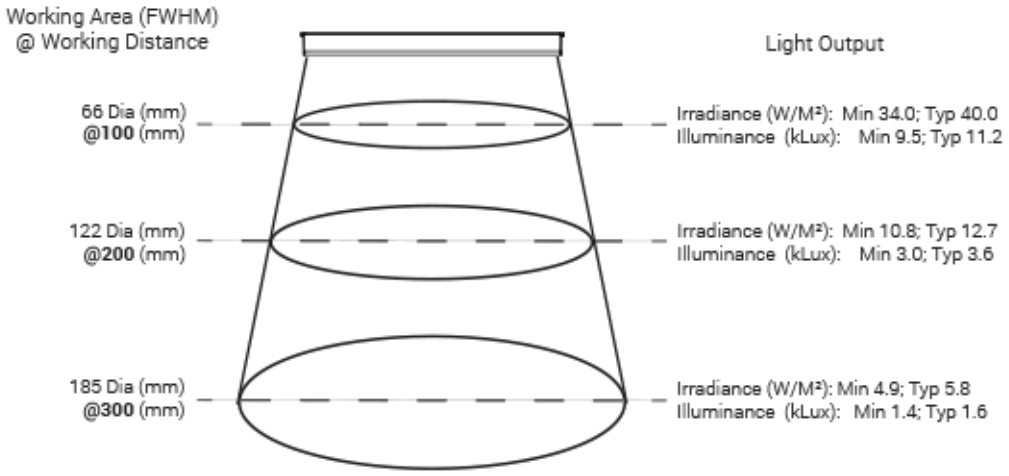
Optical Specs

Intensity Distribution

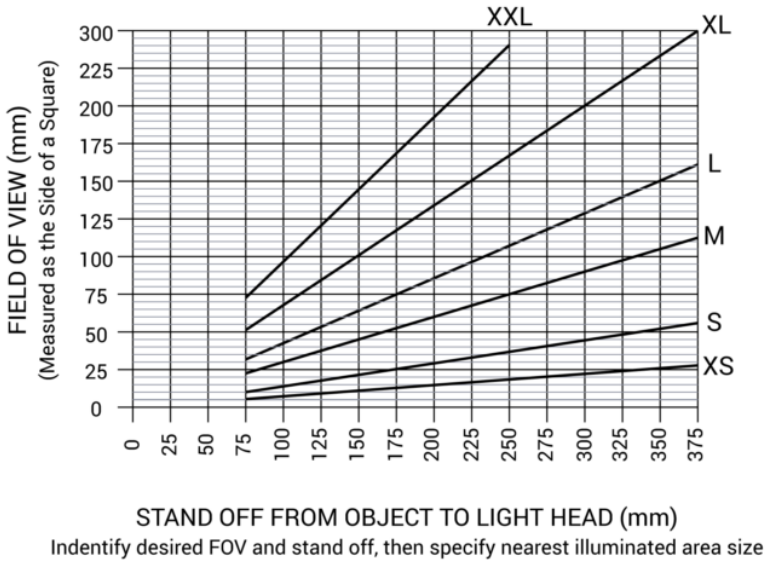


Optical measurement taken using RL1424-660100LC2 @ 200 mm

Area of Illuminance & Intensity



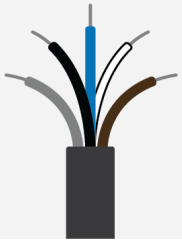
[FIELD OF VIEW CHART]



Indentify desired FOV and stand off, then specify nearest illuminated area size

Electrical Specs

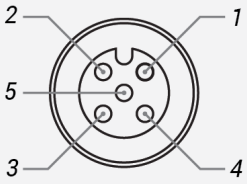
Standard Flying Lead Functions for 24V, IC, I3 and I3S Control Options



COLOR	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
BROWN	24 V DC	24 V DC	24 V DC
WHITE	N/A	0-10 V ANALOG DIMMING	RESERVED
BLUE	DC GND	DC GND	DC GND
BLACK	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
GRAY	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **without** the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.*

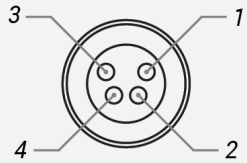
M12 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	RESERVED
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
5	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 5-position Male M12 connector.*

M8 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 4-position Male M8 connector.*

For details on operating configurations without built-in control (C1, C5, Q1, and Q4 control, when available), please refer to Advanced illumination's controller manuals.

Control Specs

C1 Connector	C5 Connector	ICS 2 (IC)	ICS 3 (I3)	ICS 3S (I3S)	24
For use with: **DCS Series Controllers**	*For use with:* **Pulsar 320 Strobe Controller.**	Continous in-line controller *Powered with:* **24V power supply**	Combination strobe/continous in-line controller *Powered with:* **24V power supply**	Default-OFF strobe/continous in-line controller *Powered with:* **24V power supply**	Flying/tinned leads *Powered with:* **24V power supply**

Warranty Information

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty.
No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

Company Information

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440 State Garage Road, Rochester, VT 05767
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Fax: 802.767.2636
Email: info@advancedillumination.com
Web: advancedillumination.com

RL208

MicroBrite™ Direct Bright Field Ring Light Series

Product Datasheet

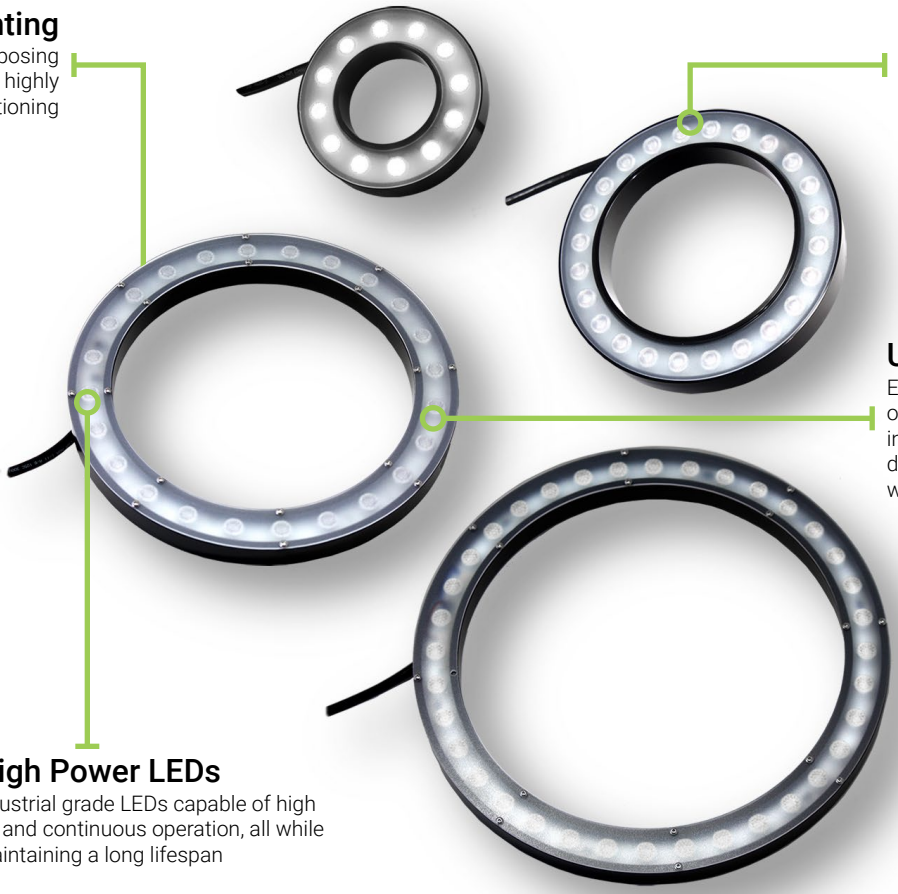
ADVANCED ILLUMINATION by Exaktera

M4 Mounting

Equipped with four opposing M4 mounting points for highly adjustable positioning

Compact, High Performance Design

Designed to be ultra compact while providing the high performance of larger ring lights



Universal LED Pads

Engineered to meet a wide range of spectral needs, this light incorporates a universal pad design allowing for a multitude of wavelength possibilities

High Power LEDs

Built with industrial grade LEDs capable of high output strobe and continuous operation, all while maintaining a long lifespan

RL208 Series Description

The MicroBrite RL208 is a compact, high-intensity ring light series, offering directional illumination that is suitable for both on-axis and off-axis applications.

This Bright Field ring light series provides uniform illumination and good detail on flat matte surfaces that also may have natural color variations.

The combination of multiple sizes and lens options allow for a wide variety of fields-of-view at various working distances.

As with most Advanced illumination products, this light family series is available with a variety of drive options, designed to fit most performance/price points.

- **Bright Field Illumination**
- **High Intensity**
- **Multiple Sizes Available**
- **16 Available Wavelengths**
- **1-2 Week BTO Lead Times**

General Information

General Specifications

Category	Specification			Detail	
Optical	Available Wavelengths			WHI, 365 nm, 375 nm, 385 nm, 395 nm, 405 nm, 455 nm, 470 nm, 505 nm, 530 nm, 590 nm, 625 nm, 660 nm, 730 nm, 850 nm, 940 nm	
	Available Lensing			Medium (20°), Wide (32°)	
	Available Light Conditioning			None	
Electrical	Power Consumption Info			See Power Requirements on Page 9	
	Cable Info			80" -0/+6" Long (2 m -0/+150 mm), 105 °C Rated, Foil Shield w/ Drain	
Mechanical	Sizing Info	Standard	Height	1.28"(32.5mm)	See Page 7 for More Details
			Outer Diameter	3.75"(95.3mm) to 9.72"(246.9mm)	
			Inner Diameter	1.97"(50mm) to 7.87"(200mm)	
	Weight Info (Standard)			~ 0.40 lbs (~181 g) per RL208-050 Unit, ~ 0.67 lbs (~304 g) per RL208-100 Unit, ~ 1.03 lbs (~467 g) per RL208-160 Unit, ~ 1.20 lbs (~544 g) per RL208-200 Unit,	
	Mounting Info			M4 Mounting Holes	
	Material Info			Anodized Aluminum Housing, Acrylic Window, Nickel Plated Brass Strain Relief, PVC Cable Jacket, Steel Black Oxide Fasteners	
Thermal	Operating Case Temperatures			25 °C to 60 °C	
	Operating Ambient Temperatures			0 °C to 35 °C	
Certification	Compliance			CE, RoHS, IEC 62471	
	IP Rating			IP50	
	Lumen Maintenance - White Only			L70 (50,000 Hours)	

General Information - Continued

Part Number Key

Model	Lens Type	-	Inner Diameter (mm)	Peak Wavelength	Connector/ Control	-	Alternative Connector
RL208	X	-	XXX	XXX	XX	-	XXX
	M (Medium)		050	365 (UV)	C1		M8[1]
	W[3] (Wide)		100	375 (UV)	C5		M12[1]
			160	385 (UV)	IC		
			200	395 (UV)	I3		
				405 (violet)	I3S		
				455 (royal blue)	24[2]		
				470 (blue)			
				505 (cyan)			
				530 (green)			
				590 (amber)			
				625 (red orange)			
				660 (red)			
				730 (IR)			
				850 (IR)			
				940 (IR)			
				WHI (white)			
more info on page			8	6	10		12

Example Part Numbers:
RL208M-050WHIC1
RL208W-200625IC-M12

Beam Angle (FWHM):
Medium = 20°
Wide = 32°

[1] Available with IC, I3, and I3S options only
[2] The 24 V version will have a lower output intensity by ~10-15% and operate at a temperature ~10-15% higher than other options.
[3] Not available with UV options

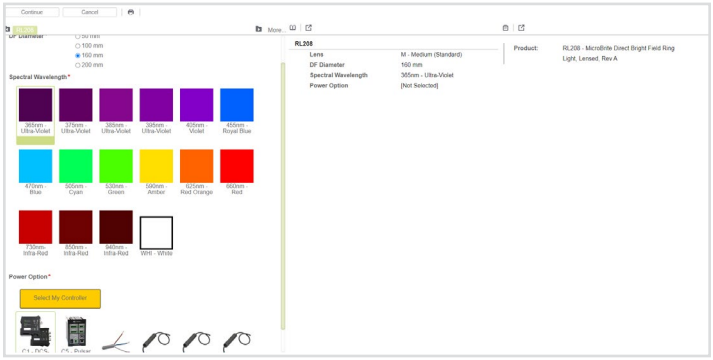
In Stock

RL208M-100WHIIC

Lead Times

Stock products ship within three days.
Build-to-Order custom products ship within one to two weeks.

Online Configurator

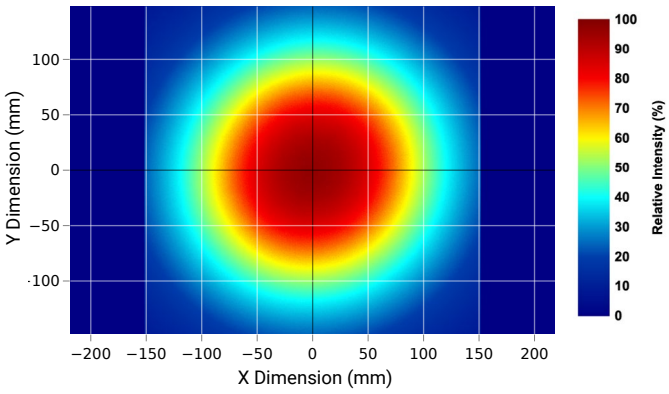


Need a build-to-order custom lighting solution in 2 weeks or less? Advanced Illumination's online configurator helps you tailor our MicroBrite™ Bright Field Series Ring Lights to your specific needs. For a guided configuration, visit our online configurator.

Optical Information

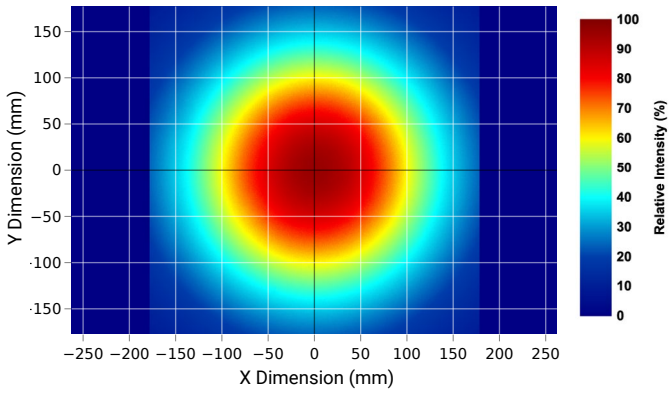
Intensity Distribution Samples

Medium Lensed Intensity Distribution at 300 mm Working Distance



Intensity distribution sample image was taken with a medium lensed white 100 mm RL208 unit.

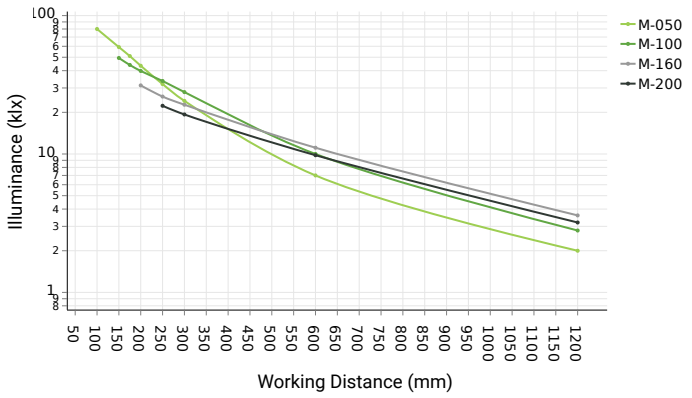
Wide Lensed Intensity Distribution at 300 mm Working Distance



Intensity distribution sample image was taken with a wide lensed white 100 mm RL208 unit.

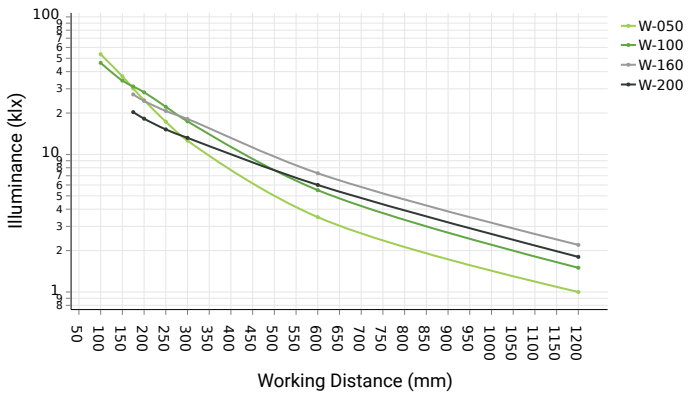
Intensity vs Working Distance

Medium Lensed Intensity vs Working Distance



Illuminance data was collected using medium lensed white RL208 units.

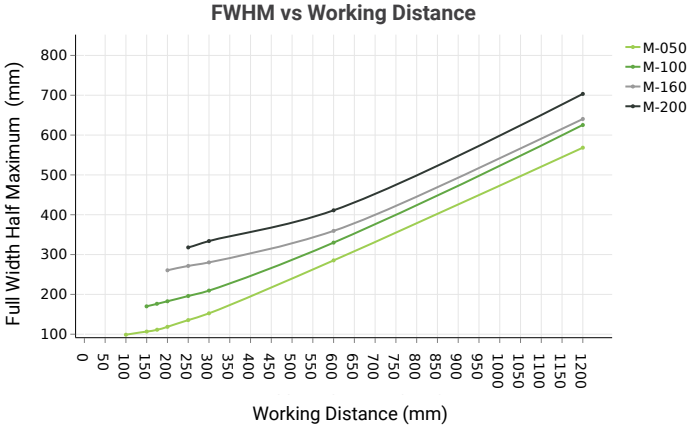
Wide Lensed Intensity vs Working Distance



Illuminance data was collected using wide lensed white RL208 units.

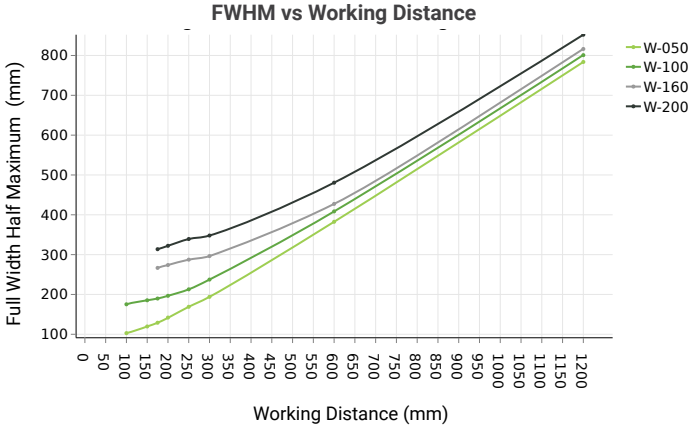
FWHM vs Working Distance

FWHM vs Working Distance



FWHM data was collected using medium lensed white RL208 units.

FWHM vs Working Distance

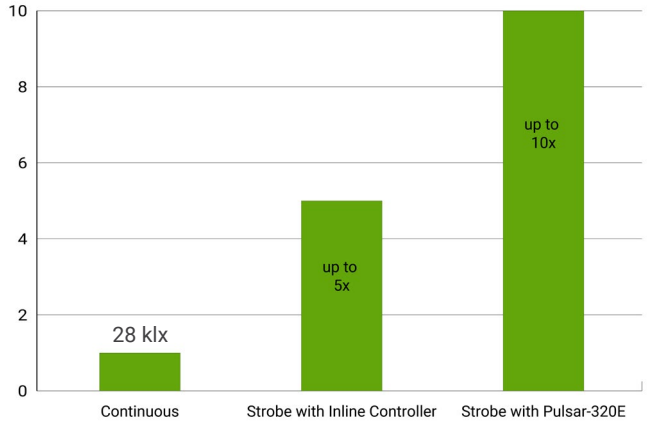


FWHM data was collected using wide lensed white RL208 units.

Disclaimer: The measurements provided above are for approximations only and may vary depending on the method of measurement and the specific configuration being measured.

Optical Information - Continued

Continuous vs Pulsed Intensity

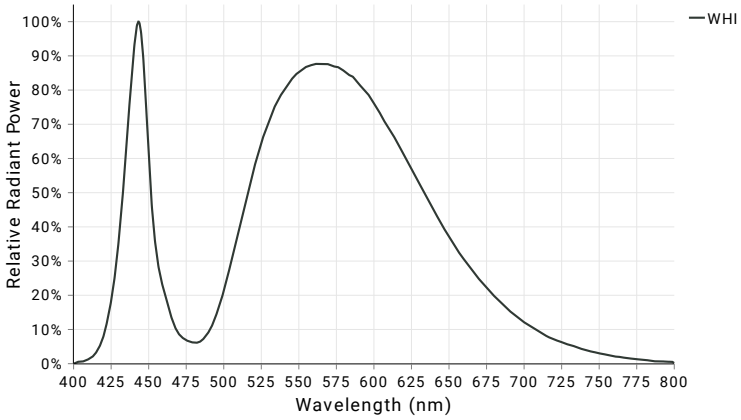


Under continuous operation, a 100 mm white medium lensed RL208 unit will output an **illuminance of 28 klx** and an **irradiance of 90.2 W/m²** at a 300 mm working distance. For applications that require higher output, the RL208 Series has been engineered to be overdrive strobe capable. When configured with AI's strobe enabled Inline Controller (ICS-3 and ICS-3S), the RL208 is capable of outputting up-to 5X continuous levels. When configured with a C5 connector, compatible with AI's Pulsar 320, a **RL208 can be strobed up-to 10X continuous intensity levels.**

Continue to next page for spectral distribution profiles.

Optical Information - Continued

White Spectral Profile

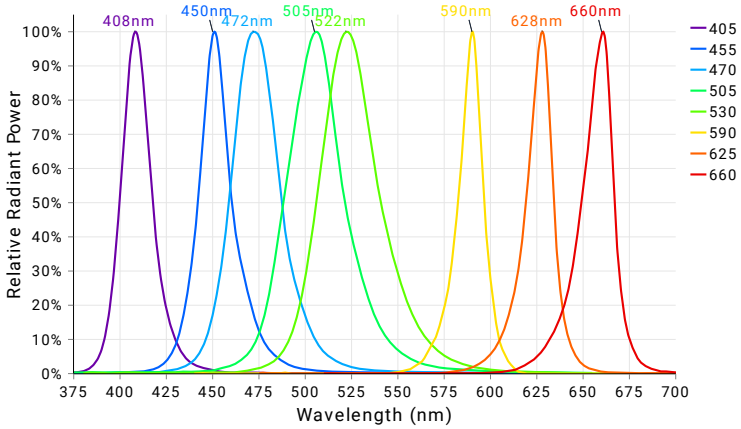


White LED illumination is the most commonly used machine vision lighting configuration. It is often the default choice when specific features of interest do not require color-based highlighting. However, white LEDs can vary in color temperature, which can impact machine vision systems, specifically when matching white light sources.

The RL208 Series white LEDs have a relatively neutral color correlated temperature (CCT) of **5500 K.**

For a more detailed look at the white spectral data, download the csv file of the raw spectral values and refer to our Product Spectra Distribution Charts PDF.

Visible Spectral Profiles

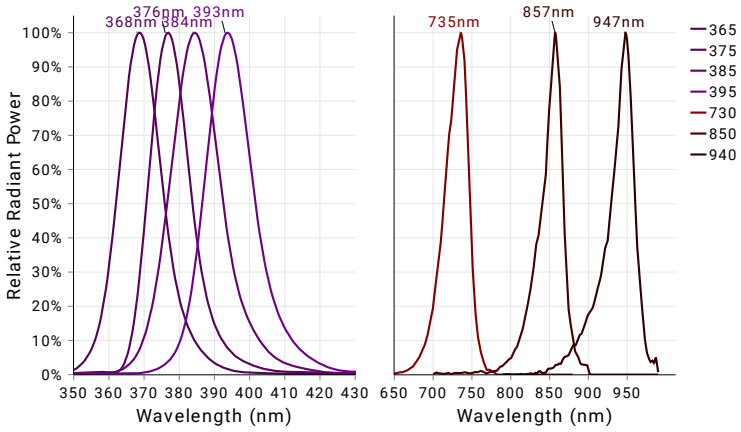


Visible color illumination consists of using wavelengths between 400-700 nm to either create or eliminate contrast on an inspection subject based on differences in a features color hue. When referring to a color wheel, simply remember the following: like colors reflect and brighten surfaces; conversely, opposing colors absorb and darken surfaces.

The RL208 Series is available in **405 nm, 455 nm, 470 nm, 505 nm, 530 nm, 590 nm, 625nm, and 660 nm** configurations.

For a more detailed look at the visible color spectral data, download the csv file of the raw spectral values and refer to our Product Spectra Distribution Charts PDF.

Non-Visible Spectral Profiles



Near-infrared (NIR) imaging is a machine vision technique using longer wavelengths of 700-1000 nm to penetrate specific materials that are otherwise opaque to under the visible spectrum. When paired with a NIR camera, a NIR light can be ideal for applications such as fill level inspection, circuit board inspection, food safety inspection, and medical imaging.

The RL208 Series is available in **365 nm, 375 nm, 385 nm, 395 nm, 730 nm, 850 nm, 940 nm** configurations.

For a more detailed look at the NIR spectral data, download the csv file of the raw spectral values and refer to our Product Spectra Distribution Charts PDF.

Disclaimer: The measurements provided above are for approximations only and may vary depending on the method of measurement and the specific configuration being measured.

Optical Information - Continued

Photobiological Risk Factors

Group	Description	Affected Wavelengths (nm)
Exempt	No Photobiological Hazard	730, 850, 940
Group 1	No Photobiological hazard under normal behavioral limitations	455, 470, 505, 530, 590, 625, 660, WHI
Group 2	Does not pose a hazard due to aversion response to bright light or thermal discomfort	365, 375, 385, 395, 405

Advanced Illumination's lighting products have been tested and classified to IEC standards by accredited testing services. For more information on photobiological risk factors, please view the following PDF: https://www.advancedillumination.com/wp-content/uploads/2019/04/IEC-040119.pdf

Cleaning Guidelines

To clean our light's optics, it is best to only clean when necessary. Dusting is always the first step in cleaning your optics. Wiping a dusty optic is like cleaning it with sandpaper. So always dust with a canned air duster or compressed and filtered air before wiping any optic. If the dusted optic has no visible stains after you dust it, then remember: "If it's not dirty, don't clean it." Avoid wiping optics when possible.

If dusting did not clean the lens or the lens has stains, use only de-ionized water and mild dish soap with a low lint cloth designed for optics to avoid damage to the optic by any harsh chemicals.

Polarizers, beam splitters and collimated films should never be wiped with any type of cloth or solvent, only use the air dusting method to clean these types of optics.

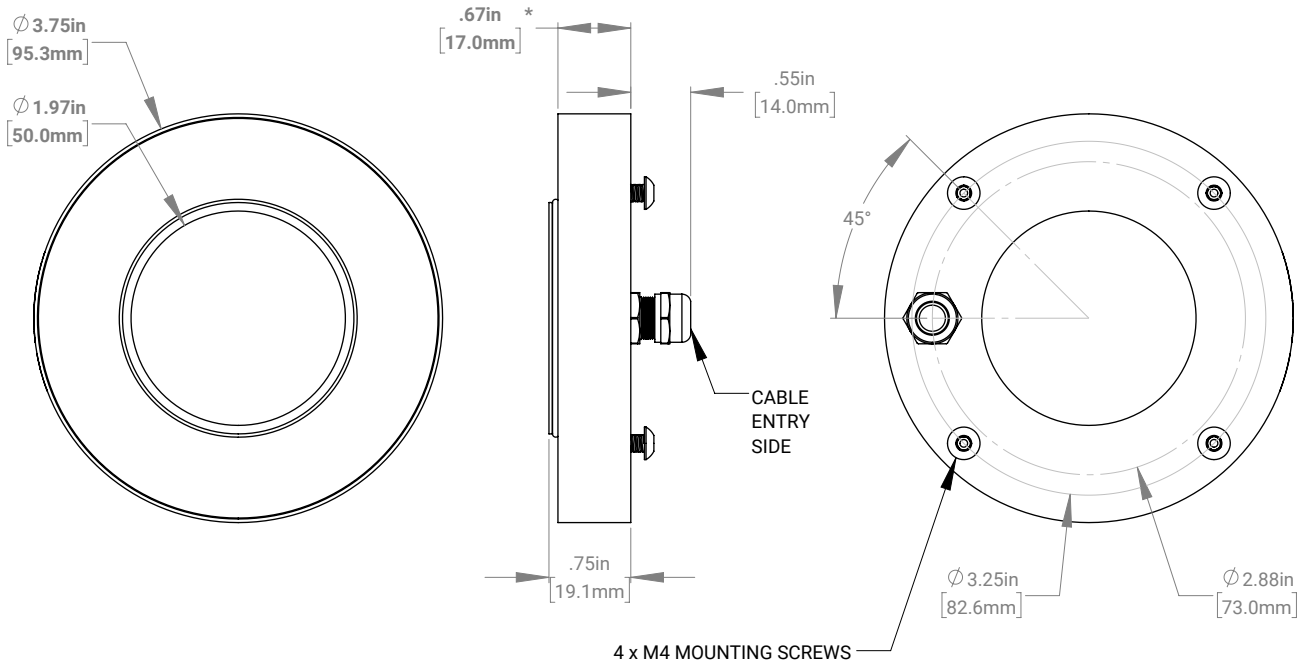
The aluminum housing can be wiped down when dusting is not a sufficient means to thoroughly clean.

Disclaimer: The measurements provided above are for approximations only and may vary depending on the method of measurement and the specific configuration being measured.

Mechanical Information

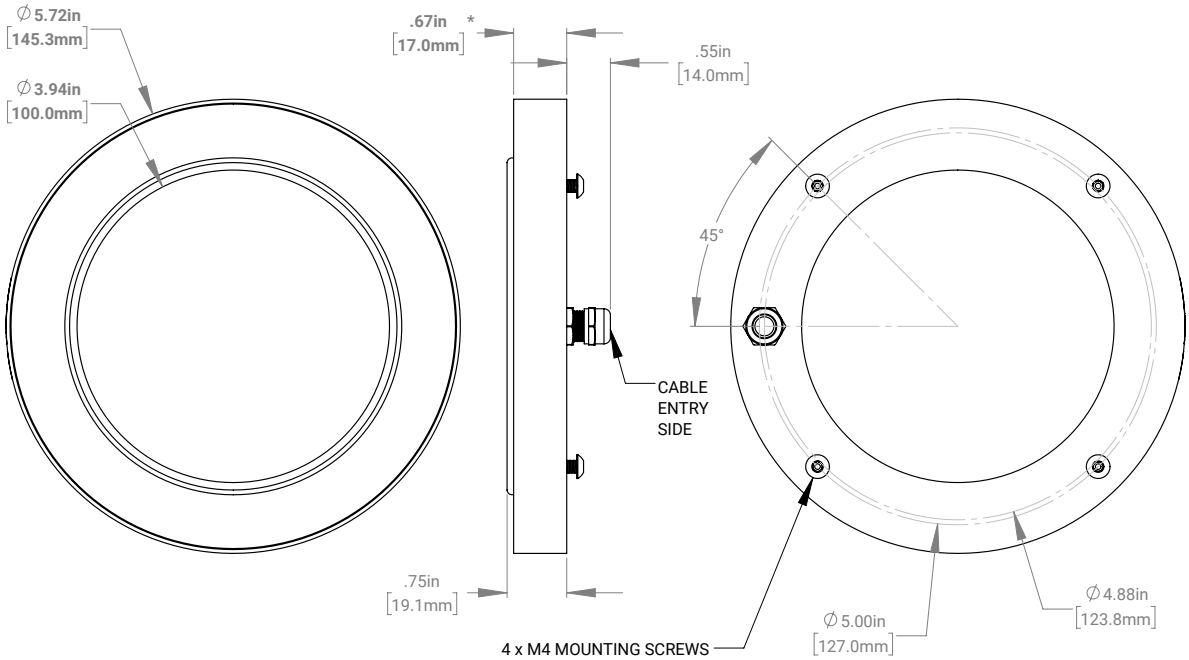
Installation Drawings

RL208-050



For full installation drawings and complete CAD models of this configuration, please visit the downloads section of the product webpage.

RL208-100

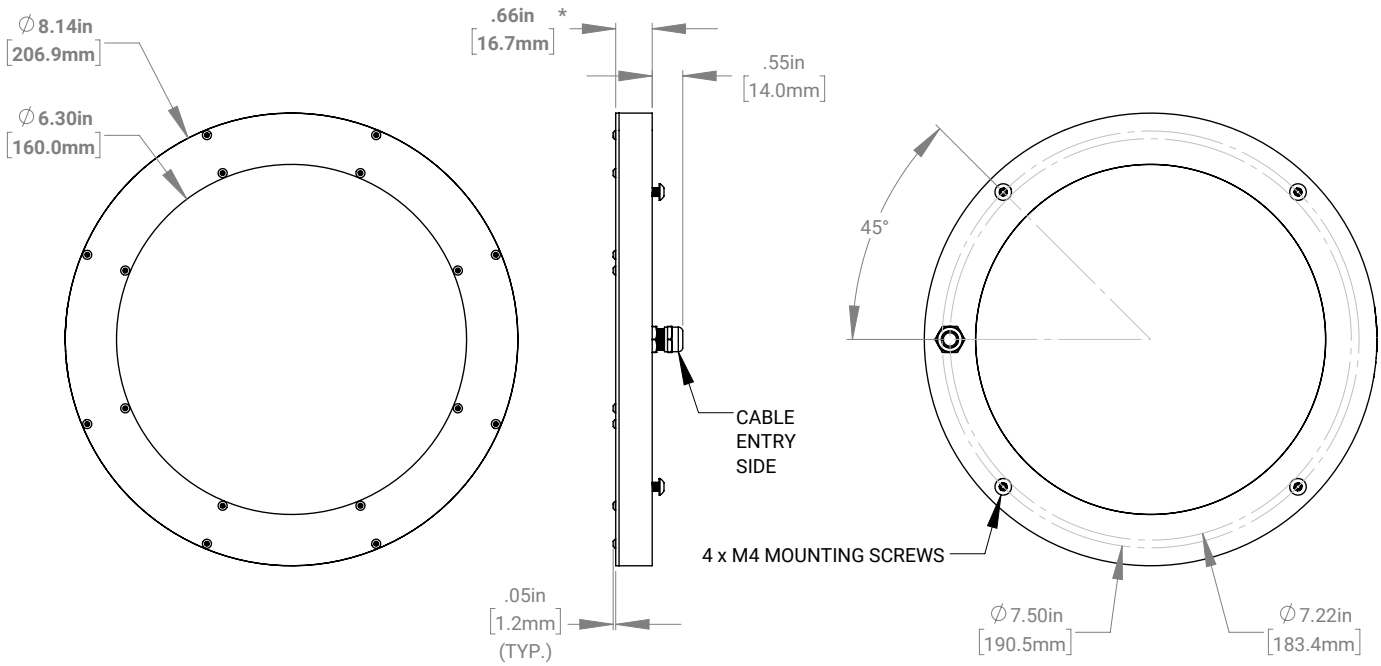


For full installation drawings and complete CAD models of this non-sealed configuration, please visit the downloads section of the product webpage.

Mechanical Information

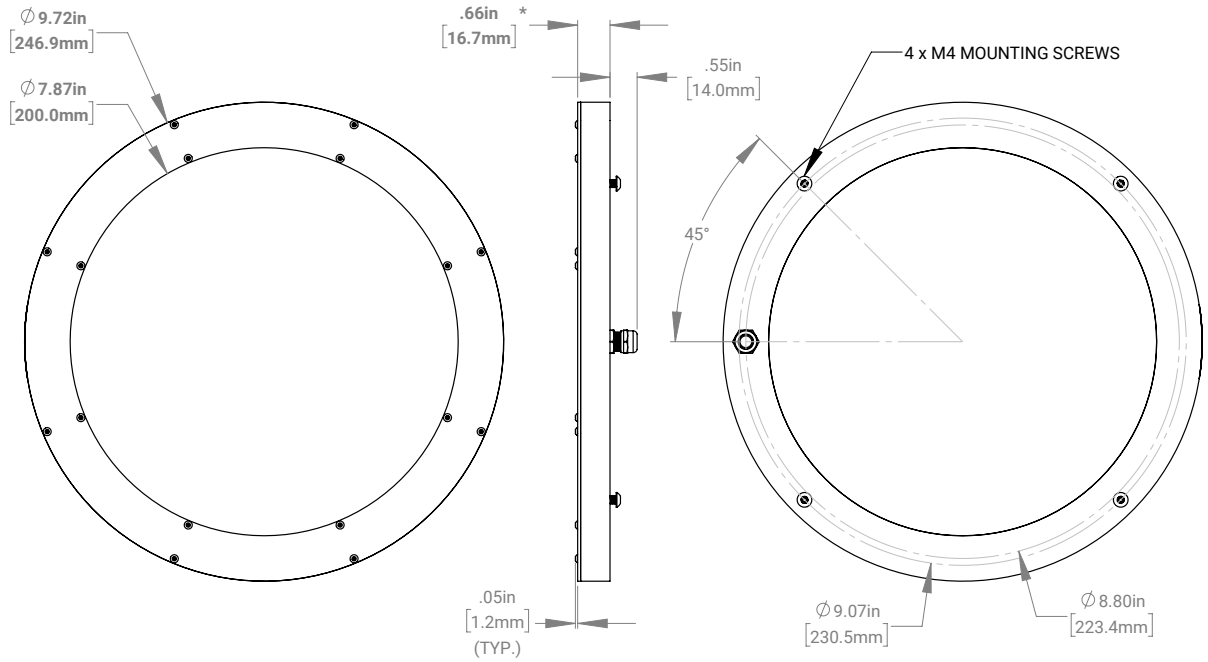
Installation Drawings

RL208-160



For full installation drawings and complete CAD models of this configuration, please visit the downloads section of the product webpage.

RL208-200



For full installation drawings and complete CAD models of this configuration, please visit the downloads section of the product webpage.

Electrical Information

Power Requirements

Current Required for Power Supply Sizing

Part Number	Wavelengths	Configured w/ 24V Driver	Configured w/ Standard Controller (C1, C5, IC, I3, I3S)
RL208X-050	365, 375, 385, 395, 405	0.12 A	0.32 A Max
RL208X-050	625, 660	0.12 A	0.28 A Max
RL208X-050	455, 470, 505, 530, 590, WHI	0.14 A	0.47 A Max
RL208X-050	730, 850, 940	0.12 A	0.22 A Max
RL208X-100	365, 375, 385, 395, 405	0.24 A	0.58 A Max
RL208X-100	625, 660	0.23 A	0.57 A Max
RL208X-100	455, 470, 505, 530, 590, WHI	0.27 A	0.79 A Max
RL208X-100	730, 850, 940	0.24 A	0.43 A Max
RL208X-160	365, 375, 385, 395, 405	0.24 A	0.62 A Max
RL208X-160	625, 660	0.23 A	0.66 A Max
RL208X-160	455, 470, 505, 530, 590, WHI	0.27 A	0.98 A Max
RL208X-160	730, 850, 940	0.24 A	0.54 A Max
RL208X-200	365, 375, 385, 395, 405	0.36 A	0.87 A Max
RL208X-200	625, 660	0.36 A	0.66 A Max
RL208X-200	455, 470, 505, 530, 590, WHI	0.40 A	0.98 A Max
RL208X-200	730, 850, 940	0.40 A	0.54 A Max

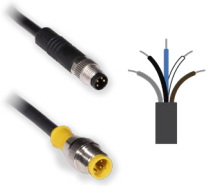
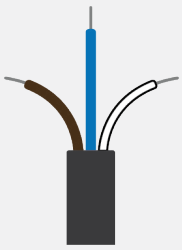
Note: All Advanced Illumination lights and controllers are nominally powered by 24V DC unless otherwise noted. Strobe overdriving with controller based models may require more current and voltage overhead. The values above do not include background current draw from the controller (~100 mA total).

Control Options

Controller Image	Controller Details	Connector Image
	**DCS Single Output Controller - Compatible with C1 Configurations** *PN: DCS-100E* The DCS-100E is a compact, din-rail mounted general-purpose external controller with one C1 output connector, wired with three channels. Capable of providing single channel control or multi-channel control for RGB compatible lights. **Output Power:** 90 W Max Continuous, 540 W Max Pulsed (Overdrive Strobe) **Output Current:** 4.5A Max Continuous, 15 A Max Pulsed **I/Os:** 3 External Trigger Inputs **Interface:** 10/100 Ethernet with Software and browser-based GUIs. SDKs are also available. For more information about our DCS-100E, please visit the controller product page.	
	**DCS Triple Output Controller - Compatible with C1 Configurations** *PN: DCS-103E* The DCS-103E is a din-rail mounted general-purpose multi-light controller with three C1 output connectors. Capable of driving three lights in sync or asynchronously. **Output Power:** 30 W Max Continuous / Output, 180 W Max Pulsed / Output **Output Current:** 1.5A Max Continuous / Output, 5 A Max Pulsed / Output **I/Os:** 3 External Trigger Inputs **Interface:** 10/100 Ethernet with Software and browser-based GUIs. SDKs are also available. For more information about our DCS-103E, please visit the controller product page.	

Electrical Information - Continued

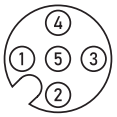
Control Options - Continued

Controller Image	Controller Details	Connector Image
	**Pulsar 320E High Current Controller - Compatible with C5 Configuration** *PN: Pulsar 320E* The Pulsar 320E is a high-power, dual output, pulse-only controller geared for overdriving driving lights at very short flash durations with very high current. **Output Power:** 2500 W Max Pulsed / Output **Output Current:** 50 A Max Pulsed / Output I**/Os:** 2 External Trigger Inputs **Interface:** 10/100 Ethernet with Software GUI. SDKs are also available. For more information about our Pulsar 320E, please visit the controller product page.	
	**Inline Controller - Continuous Only - IC Configurations** *PN: N/A* The IC is an inline, cable-mounted continuous-only controller configured/wired directly for the ordered light head. **Output Power:** 25 W Max Continuous **Output Current:** 1.25 A Max Continuous **I/O:** 1 0-10 V Analog Dimming Input **Interface:** Direct Cable (flying leads or optional connector) For more information about our IC Controller please visit the controller product page.	
	**Inline Controller - Strobe and Continuous - I3 & I3S Configurations** *PN: N/A* The I3 and I3S are inline, cable-mounted continuous and pulse (overdrive strobe) capable controllers configured/wired directly for the ordered light head. When operated in pulsed mode, the I3 is a default-on device on power up, whereas the I3S is default-off, requiring a trigger to illuminate. **Output Power:** 25 W Max Continuous, 125 W Max Pulsed **Output Current:** 1.25 A Max Continuous, 8 A Max Pulsed (Load Dependent) **I/Os:** 1 Gated Trigger Signal, 1 0-10 V Analog Dimming Input **Interface:** Direct Cable (flying leads or optional connector) For more information about our I3/I3S Controller, please visit the controller product page.	
	**24V Driver - Continuous Only - 24 Configurations** *PN: N/A* 24V option allows lights to operate continuous output with 24V connection and no additional controllers. **Modes:** Continuous, can be wired to some 3rd party controllers or external relays for gated operation **Interface:** Direct cable (flying leads or connector options)	

Electrical Information - Continued

Inline Control Option Wiring Information

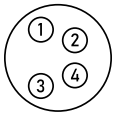
Standard Flying Lead and Optional M12 Connector Pinout Functions

Pin (M12)	Wire Color	24V Functions	IC Functions	I3/I3S Functions	M12 Pinout
1	BROWN	24V DC	24V DC	24V DC	
2	WHITE	N/A	0-10V Analog Control	Reserved	
3	BLUE	DC GND	DC GND	DC GND	
4	BLACK	N/A	Gate Low	PNP/Active High Trigger	
5	GRAY	N/A	N/A	0-10V Analog Control	

5-Position Male Connector

The functions above are only applicable when ordering an 24, IC, I3, I3s, or I4 power configuration with our without an M12 connector. For more wiring information pertaining to strobing and dimming functionality, please download the controller manuals and datasheets.

Optional M8 Connector Pinout Functions

Pin (M8)	Wire Color	24V Functions	IC Functions	I3/I3S Functions	M8 Pinout
1	BROWN	24V DC	24V DC	24V DC	
2	WHITE	N/A	0-10V Analog Control	Reserved	
3	BLUE	DC GND	DC GND	DC GND	
4	BLACK	N/A	Gate Low	Active High Trigger	

4-Position Male Connector

The functions above are only applicable when ordering an 24, IC, I3, or I3s power configuration with our without an M8 connector. For more wiring information pertaining to strobing and dimming functionality, please download the controller manuals and datasheets.

Accessories

Category	Accessory Image	Accessory Detail
Power Supply		**24 Volt DC Power Supply** *PN: PS24-TL* This convenient power source is a universal AC input switching power supply with a regulated output DC current. The power supply comes with an LED Power Indicator, tinned leads marked Positive (+) and Negative (-) and 2 WAGO connectors for simplified assembly. For more information about our 24 Volt DC Power Supply, please visit this webpage.
Dimmer		**Manual Dimming Accessory for the IC, I3 and I3s** *PN: DCS-MP* The DCS-MP is a 30-position potentiometer, detented for precision level control and provides repeatable dimming with cable inline controllers. Features include DIN-rail mountable, a flip up cover to prevent accidental adjustments, spring clamp wiring terminal for flying leads or an M12 connector for use with the IC or I3/I3S Inline Controllers. For more information about our Manual Dimming Accessory please visit this webpage.
Dimmer		**Manual Dimming Accessory for the IC** *PN: MP-ICS* The MP-ICS is a dimmer which is designed for use on lights with the IC Inline Controller. This unit provides for 0 – 100% intensity control. It is NOT COMPATIBLE with LLI37, BLI38, LLI67, and BLI68 "IC" Lights or lights built with the "24v controller" option. For more information about our Manual Dimming Accessory, please visit this webpage.

Accessories - Continued

Category	Accessory Image	Accessory Detail
Extension Cable		**DCS-100E/103E Extension Cable, Single Light Power Cable - C1 Configuration** *PN: LC-XX-S* This extension cable was designed for applications requiring power cables longer than the standard 2 meters provided with Ai lights. This single light cable features a single male and single female 7 pin locking connector (C1) and can be purchased in 3 - 15-meter lengths. For more information about our DCS-100E/103E Extension Cable, Single Output, please visit this webpage.
Extension Cable		**DCS-100E/103E Extension Cable, Dual Light Power Cable - C1 Configuration** *PN: LC-XX-Y* This extension cable was designed for applications requiring two identical lights to be powered through a single controller. These Y cables feature a single male and dual female 7 pin locking connectors (C1) and can be purchased in 3 - 15-meter lengths. See attached spec sheet for compatible light configuration. For more information about our DCS-100E/103E Extension Cable, Split Output, please visit this webpage.
Extension Cable		**Pulsar 320E Extension Cable - C5 Configuration** *PN: LC-XX-S-C5* This extension cable was designed for applications requiring power cables longer than the standard 2 meters provided with Ai lights. This single light cable features a single male and single female Pulsar 320 connector (C5) and can be purchased in 3 - 15 meter lengths. For more information about our Pulsar 320E Extension Cable, please visit this webpage.
Adaptor Cable		**Cognex Gen2 Inline Controller Adaptor Cable** *PN: AD-I3-CGX2* This cable adaptor is for connecting I3/I3S configured lights with Cognex Gen2 Cameras, and comes with a male to female M12 connectors. For more information about our Cognex Gen2 Inline Controller Adaptor Cable, please visit this webpage.
Filters		**Camera Lens Band Pass FIlters** *PN: BPXXX-YYY* Eliminating all but a narrow band of light (+/- 40nm) centered on the specified wavelength, band pass filters are used to enhance colors, or to stop unwanted ambient light from reaching the camera. Filtering can replace existing shrouds, simplifying the physical set up of an inspection site. Ai offers 635nm and 660nm band pass filters to fit several different lens sizes. For more information about our Camera Lens Band Pass FIlters, please visit this webpage.
Mounting Brackets		**Mounting Brackets** *PN: LB* For mounting purposes this product is compatible with Fastens to the M4 mounting channel for simplified mounting. Included in product purchase. For more information about our Mounting Brackets, please visit this webpage.

Additional Information

Warranty

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty. No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Compliancy

Our lighting products are designed and tested to meet CE, RoHS, and IEC standards. As a global ISO 9001 certified company, we understand the importance of compliance and perform accelerated testing on every product before shipment. For more information on our compliance standards, please see our compliancy documentation here: https://www.advancedillumination.com/services/compliance-statements/

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

Company Information

Advanced Illumination
440 State Garage Road, Rochester, VT 05767
Phone: +1 (802) 767 3830
Fax: +1 (802) 767 2636
Email: info@advancedillumination.com
Web: advancedillumination.com

RL2316

Compact Aimed Bright Field

Product Highlights

- The RL2316 is characterized as a Compact Aimed Bright Field ring light.
- Precisely aimed LEDs provide a level of lighting control not found in traditional illuminators.

General Specifications

Electrical Specifications	Color	24V Current	All Other Controls
	625, 660, 880	0.12A	0.06A Max
	395, 470, 520, WHI	0.08A	0.04A Max
Normal Operating Temperature	0 - 60°C		
Weight	58.9g (2.08oz)		
Standard Cable Information	2 m long -0/+150 mm (80" -0/+6") - 105°C rated PVC jacket, foil shield with drain.		
Photobiological Risk Factor	Exempt Applicable Wavelengths: 880 Group 1 (Low-Risk) Applicable Wavelengths: 470, 520, 625, 660, WHI Group 2 (Moderate-Risk) Applicable Wavelenghts: 395		
Compliance	CE, RoHS, IEC 62471		
IP Rating	IP40		
Lumen Maintenance	L70 = 50,000 Hours		

Part Number Key

Model	–	Peak Wavelength	Stand Off (mm)	Illuminated Field of View (mm)	Connector/ Control	Light Conditioning Option	–	Alternative Connector
RL2316	–	XXX	XXX	XX	XX	X	–	XXX
RL2316		395 (UV)[2] 470 (blue) 520 (green) 625 (red orange) 660 (red) 880 (IR) WHI (white)	See chart to compute stand off	XS S M L XL	C1 C5 IC I3 I3S 24	D (Diffuser) P[3] (Polarizer)		M8[1] M12[1]

EX:
RL2316-395100MC1D
RL2316-62515XLI3P-M12

[1] Available with IC, I3, I3S, and 24 V options only
[2] Not available with IC and 24 V options
[3] Not available with 395 (UV) option; 470 (blue) will reduce the life of the polarizer

See website product page for in-stock product numbers.

Shipping:
Stock Products: within three days
Build-to-Order Products: within one to three weeks

Change Notice

PCN No: 166

Date Issued: May 5, 2023
Notice Type: Product Change
Product Type: 660nm Wavelength on traditional 5mm Lights Discontinuation

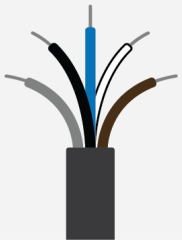
Change Notification Summary

Advanced illumination (Ai) will be ending the manufacture of the 660nm color option on our classic aimed lights due to the LEDs being discontinued from the manufacturer. We expect to have six months of inventory to fulfill orders, after that we suggest purchasing the same light but with the 625nm wavelength.

Please contact your Ai Sales Representative if you have any questions.

Electrical Specs

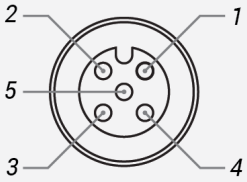
Standard Flying Lead Functions for 24V, IC, I3 and I3S Control Options



COLOR	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
BROWN	24 V DC	24 V DC	24 V DC
WHITE	N/A	0-10 V ANALOG DIMMING	RESERVED
BLUE	DC GND	DC GND	DC GND
BLACK	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
GRAY	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **without** the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.*

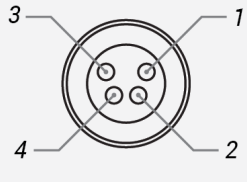
M12 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	RESERVED
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
5	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 5-position Male M12 connector.*

M8 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



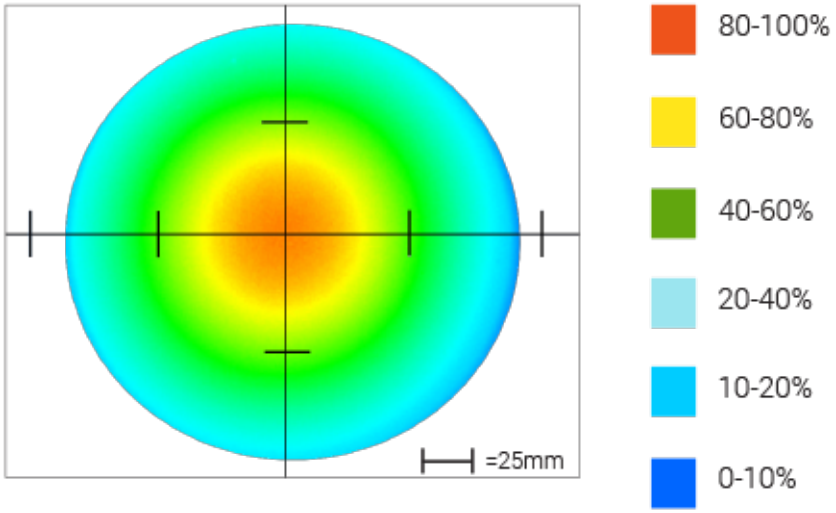
PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 4-position Male M8 connector.*

For details on operating configurations without built-in control (C1, C5, Q1, and Q4 control, when available), please refer to Advanced illumination's controller manuals.

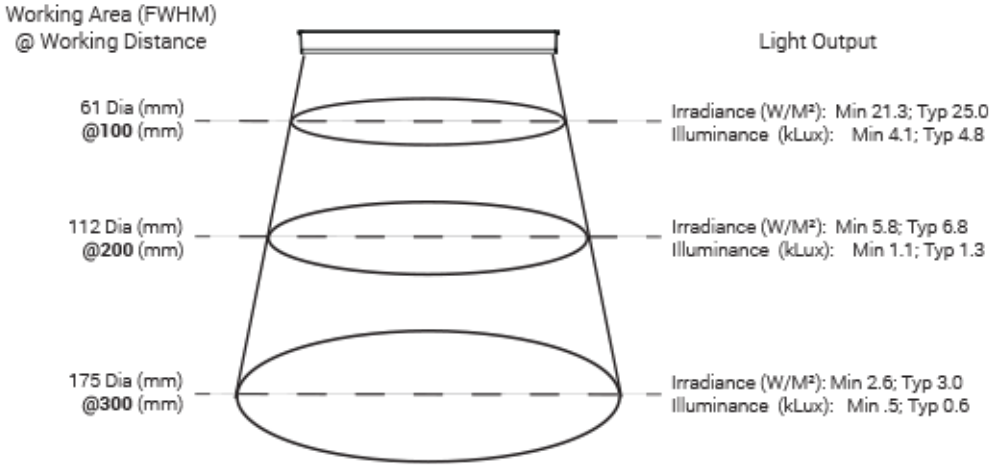
Optical Specs

Intensity Distribution

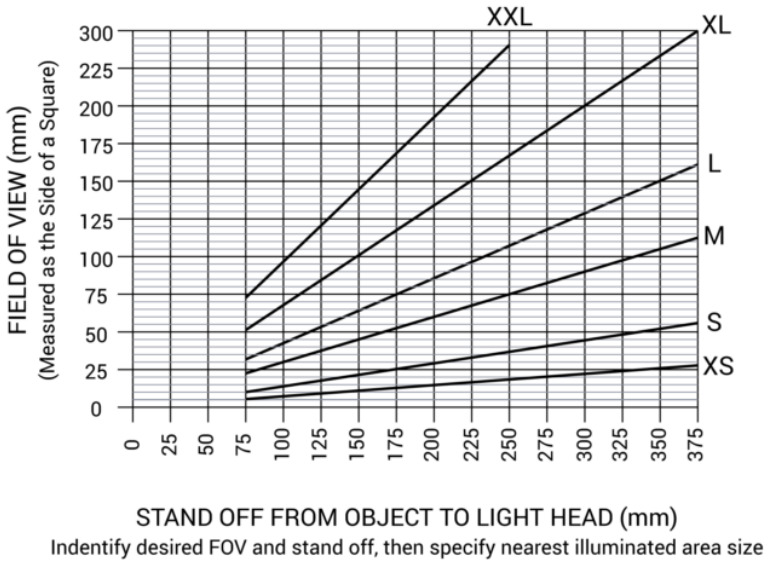


Optical measurement taken using RL2316-625100LI3 @ 100 mm

Area of Illuminance & Intensity

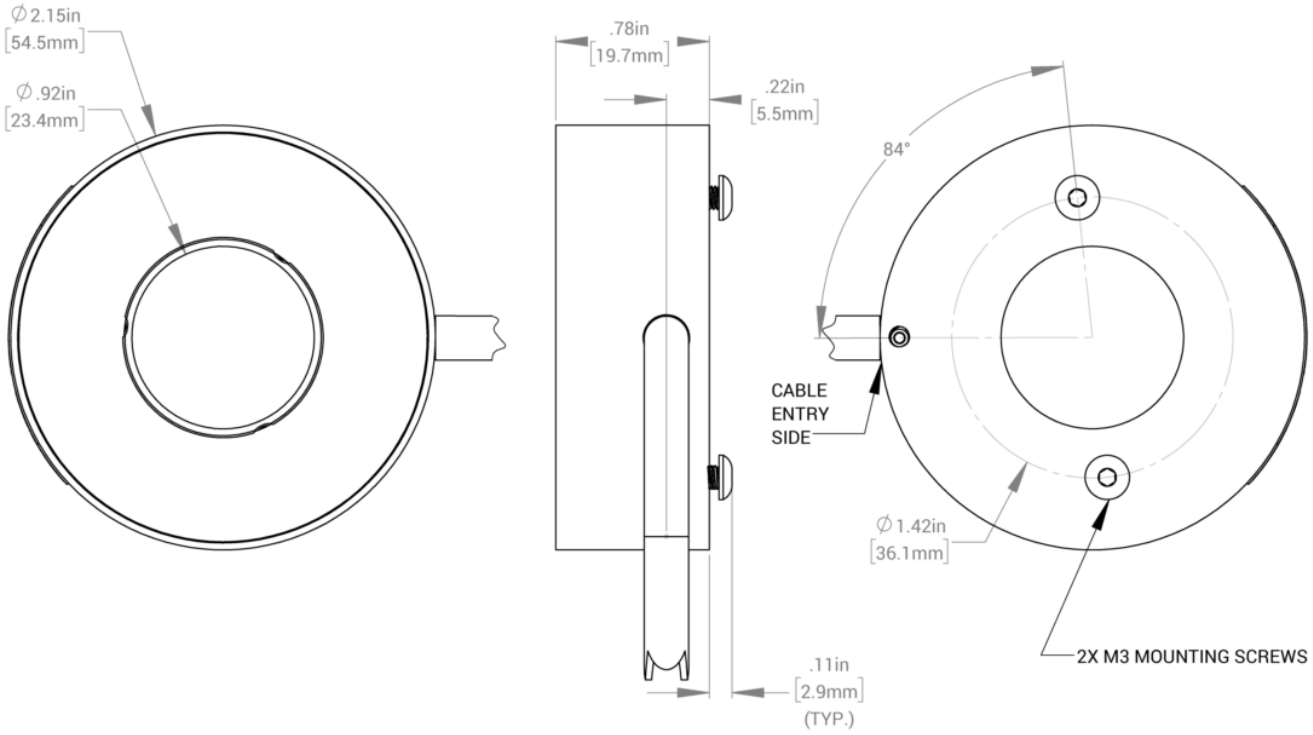


[FIELD OF VIEW CHART]



Indentify desired FOV and stand off, then specify nearest illuminated area size

Mechanical Specs



Control Specs

C1 Connector	C5 Connector	ICS 2 (IC)	ICS 3 (I3)	ICS 3S (I3S)	24
For use with: **DCS Series Controllers**	*For use with:* **Pulsar 320 Strobe Controller.**	Continous in-line controller *Powered with:* **24V power supply**	Combination strobe/continous in-line controller *Powered with:* **24V power supply**	Default-OFF strobe/continous in-line controller *Powered with:* **24V power supply**	Flying/tinned leads *Powered with:* **24V power supply**

Warranty Information

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty.
No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

Company Information

Advanced Illumination
440 State Garage Road, Rochester, VT 05767
Phone: 802.767.3830
Fax: 802.767.2636
Email: info@advancedillumination.com
Web: advancedillumination.com

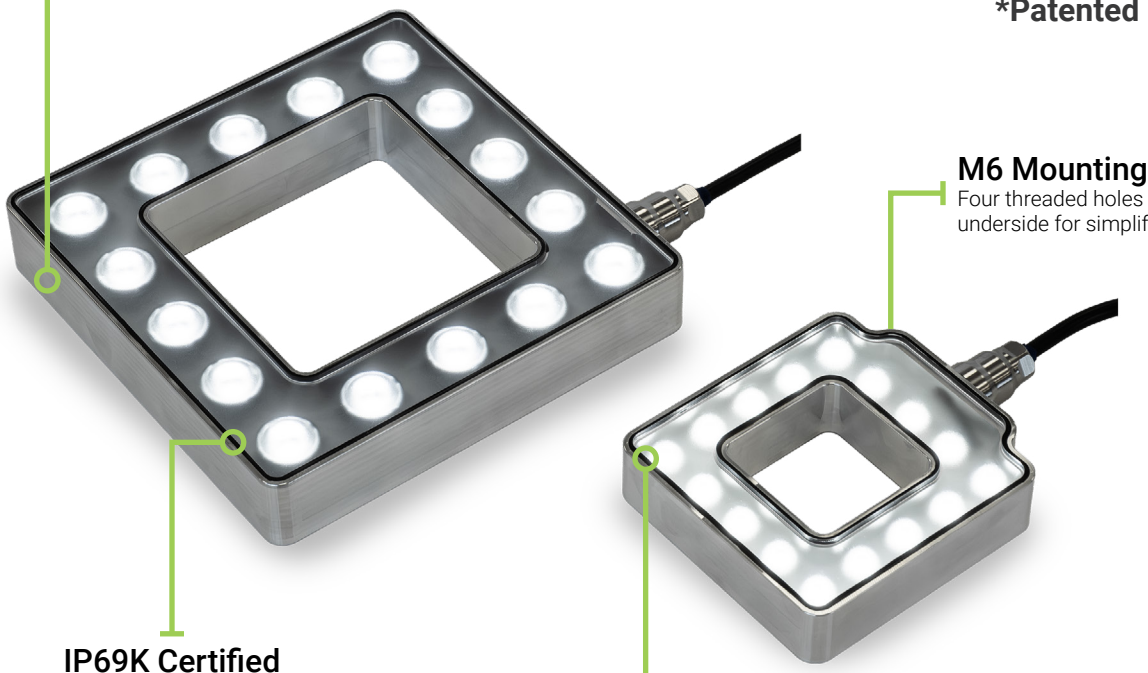
RL322 Series

UltraSeal Ring Lights | Product Datasheet

ADVANCED ILLUMINATION by Exaktera

Caustic Resistant Housing
Configurable with either 316 Stainless Steel or Anodized Aluminum depending on cleaning requirements

***Patented Design**



M6 Mounting Points
Four threaded holes on the underside for simplified installation

IP69K Certified
Engineered to handle the hygenic washdown environments

Virtually Crevice Free
Designed for easy cleaning with no exposed fasteners for minimal chance of bacteria buildup

RL322 Series Description

Engineered for critical hygienic environments, the RL322 Series UltraSeal™ Ring Light provides rugged bright field illumination in 50mm and 100mm opening sizes. Achieving 3rd-party IP69K certification, these lights ensure complete protection against high-pressure, high-temperature steam cleaning.

Their patented, virtually crevice-free design eliminates exposed fasteners to prevent bacteria buildup and simplifies cleaning. This hygienic construction makes them ideal for direct installation in Food & Beverage splash zones, ensuring reliable performance despite constant exposure to water, food debris, and rigorous sanitation protocols. Available in Stainless Steel or Anodized Aluminum to suit specific caustic resistance needs, the RL322 Series can be paired with autoVimation's IP69K Dolphin camera enclosures (an Exaktera family product) for a complete, sanitary machine vision imaging solution.

- **IP69K Certified**
- **Creavice-free Housings**
- **High Intensity**
- **14 Wavelengths Available**
- **Polarization Available**

General Information

General Specifications

Category	Specification	Detail
Optical	Available Wavelengths	WHI, 365 nm, 375 nm, 385 nm, 395 nm, 405 nm, 455nm, 470 nm, 530 nm, 625 nm, 660 nm, 730 nm, 850 nm, 940 nm
	Available Lensing	**50 mm Unit:** Narrow (12°), Medium (20°), Wide (32°), No Lens **100 mm Unit:** Narrow (14°), Medium (25°), Wide (36°), Extra Wide (55)°, No Lens
	Available Light Conditioning	Homogenizer, Diffuser, Polarizer
Electrical	Power Consumption Info	See Power Requirements on Page 9
	Cable Info	80" -0/+6" Long (2m -0/+150 mm), -105 °C Rated, Foil Shield w/ Drain
Mechanical	Sizing Info	See Page 8 for Details
	Camera Opening	50mm x 50mm & 100mm x 100mm
	Weight Info (Standard)	**50 mm:** 0.72 lbs (~326 g) (aluminum), 2.16 lbs (~979 g) (stainless) **100 mm:** 2.16 lbs (~979 g) (aluminum), 6.3 lbs (~2857 g) (stainless)
	Mounting Info	4X M6 Threaded Holes
	Material Info	Anodized Aluminum or Stainless Steel Housing, Acrylic Window, Stainless Steel Strain Relief, PVC Cable Jacket, Steel Back Oxide Fasteners
Thermal	Operating Case Temperatures	25 °C to 60 °C
	Operating Ambient Temperatures	0 °C to 35 °C
Certification	Compliance	CE, RoHS, IEC 62471
	IP Rating	IP69K Certified
	Lumen Maintenance - White Only	L70 (50,000 Hours)

General Information - Continued

Part Number Key

Model	-	Lens	Inner Opening	-	Peak Wavelength	Connector/ Control	Window/ Diffusion Level	Opt. Light	Finish	-	Opt. Connector
XXX	-	XX	XXX	-	XXX	XXX	X	X	XX	-	XXX
RL322		N (Narrow)	050 (50mm)		365[2,3]	EC	A (Clear)	P (Polarizer)	SS (Stainless)		M8
		M (Medium)	100 (100mm)		375[2,3]	ES	H (Homogenizer)		AL (Anodized Aluminium)		M12
		W (Wide)			385[2,3]	C1	D (Diffuser)				
		Z (Extra Wide[1)])			395[2,3]	C5					
		X (No Lens)			405	IC					
					455	I3					
					470	I3S					
					530	I4					
					625						
					660						
					730[3]						
					850[3]						
					940[3]						
					WHI						
more information on page		4	7		5	9		6			

Example Part Numbers:
RL322-Z100-450C5APSS-M8
RL322-M050-660ICDAL-M12

[1] Not available for 50 mm size.
[2] Only available with M lens for 50mm size.
[2] Only available with N,M,&W lenses for 100mm size.
[2] Not available with diffuser.
[3] Not available with polarizer.

In Stock

Unavailable

Lead Times

Build-to-Order products ship within six to ten weeks (typical).

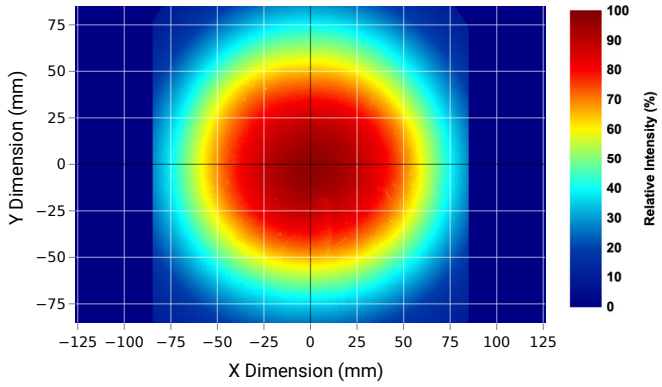
Configurator

Need a build-to-order lighting solution? Advanced Illumination's online configurator helps you tailor our RL322 UltraSeal Series to your specific needs. For a guided configuration of the RL322 UltraSeal Series, visit our online configurator by navegating to the product's webpage and selecting the "Configure" button.

Optical Information

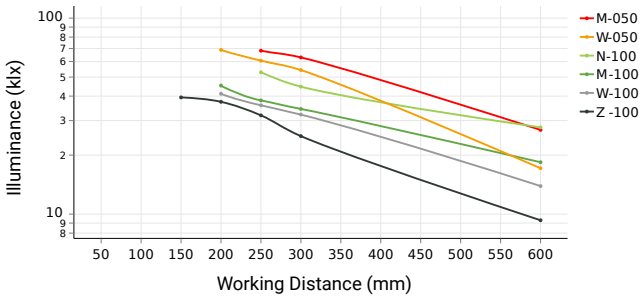
Intensity Characteristics

Intensity Distribution Image at 300 mm Working Distance



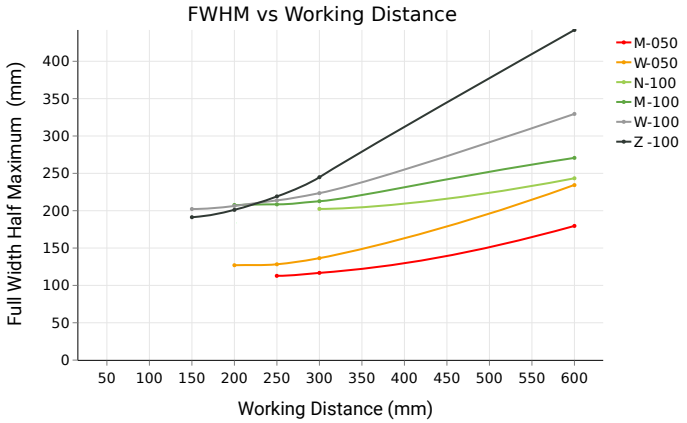
Intensity distribution sample image was taken with a 50mm white medium lensed RL322 unit.

Illuminance vs Working Distance



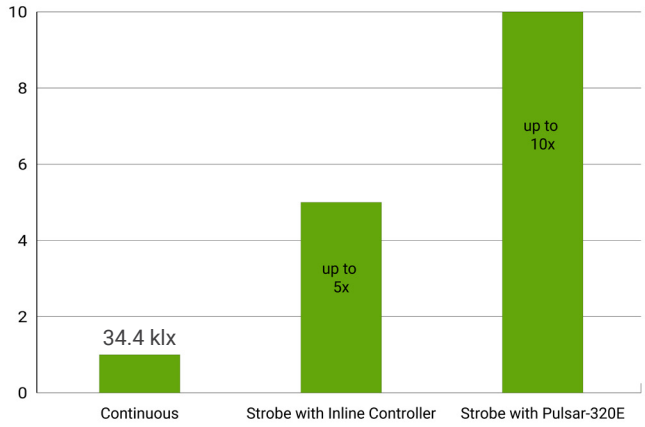
Illuminance data was collected using a white RL322 units.

FWHM vs Working Distance



Full Width Half Maximum (FWHM) data collected using white RL322 units with various lens and size configurations.

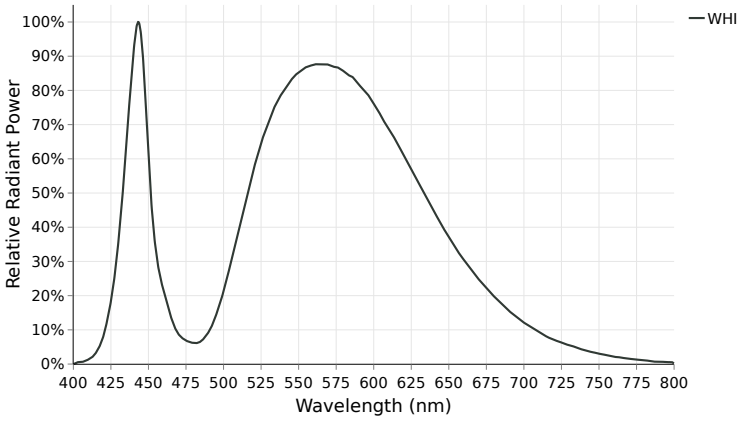
Continuous vs Strobe Intensity



Under continuous operation, an 100 mm white medium lensed RL322 unit will output a **maximum illuminance of 34.4 klx** and a **maximum irradiance of 107.1 W/m²** at a working distance of 300 mm. For applications that require higher output, the RL322 Series has been engineered to be overdrive strobe capable. When configured with AI's strobe enabled Inline or Embedded Controllers (I3, I3S, I4, and ES), the RL322 is capable of outputting up-to 5X continuous levels. When configured with a C5 connector, compatible with AI's Pulsar 320E, a RL322 can be strobed up-to 10X continuous intensity levels.

Optical Information - Continued

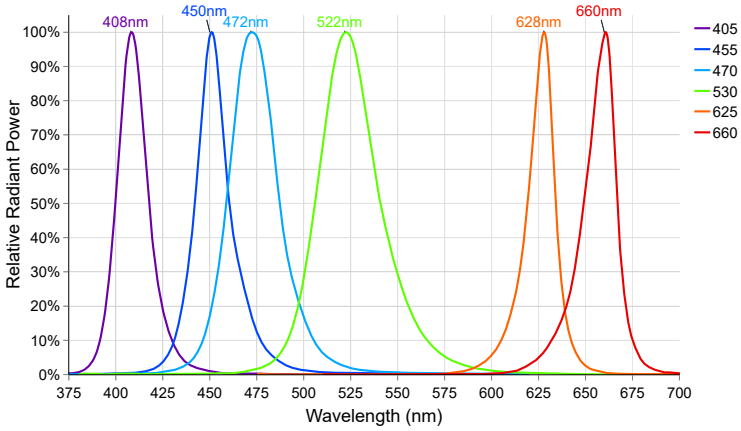
White Spectral Profile



White LED illumination is the most commonly used machine vision lighting configuration. It is often the default choice when specific features of interest do not require color-based highlighting. However, white LEDs can vary in color temperature between different lighting families, which can impact machine vision systems, specifically when matching white light sources.

The RL322 Series white LEDs have a relatively neutral color correlated temperature (CCT) of **5500k.**

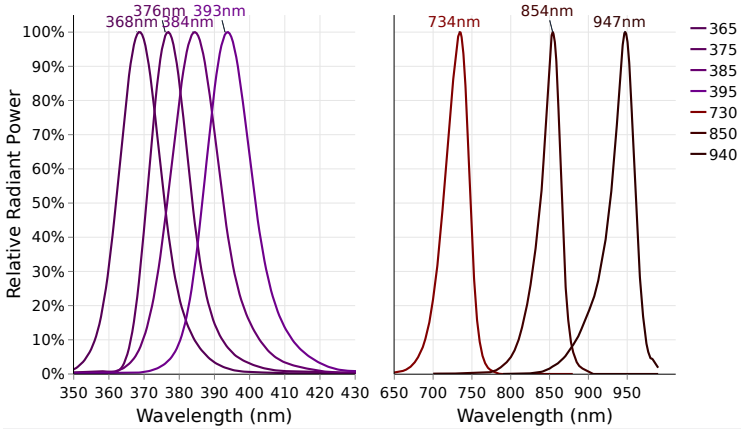
Visible Spectral Profiles



Visible color illumination consists of using wavelengths between 400-700 nm to either create or eliminate contrast on an inspection subject based on differences in a features color hue. When referring to a color wheel, simply remember the following: like colors reflect and brighten surfaces; conversely, opposing colors absorb and darken surfaces.

The RL322 Series is available in **405 nm, 455 nm, 470 nm, 505 nm, 530nm, 590 nm, 625 nm, 660 nm** configurations.

Non-Visible Spectral Profiles



Near-infrared (NIR) and ultraviolet A (UVA) imaging are machine vision techniques that utilize wavelengths outside the visible spectrum. NIR light, with wavelengths between 700-1000 nm, can penetrate certain materials opaque to visible light, making it ideal for detecting overripeness and subsurface defects. In contrast, UVA light, typically ranging between 315-400 nm, interacts with specific substances to induce fluorescence, such as certain molds, fungal toxins, and shell fragments.

The AL325 Series is available in **365 nm, 375 nm, 385 nm, 395 nm, 730nm, 850 nm and 940 nm** configurations.

Disclaimer: The measurements provided above are for approximations only and may vary depending on the method of measurement and the specific configuration being measured.

Optical Information - Continued

RL322 Series Polarization Option

Non-polarized

Polarized

Polarization has various applications, but it is most commonly used to reduce glare on specular surfaces when imaging reflective materials like plastic, metal, glass, or wet surfaces. By placing a linear polarizer over the light source and another over the camera lens, oriented perpendicularly, reflected light that causes glare can be selectively blocked. This allows for the observation of details that would otherwise be obscured by the reflection, such as printed text on packaging. However, since polarization inherently blocks some light, you may need to increase exposure to compensate for the reduced intensity, or consider alternative lighting geometries to lessen glare without polarization.

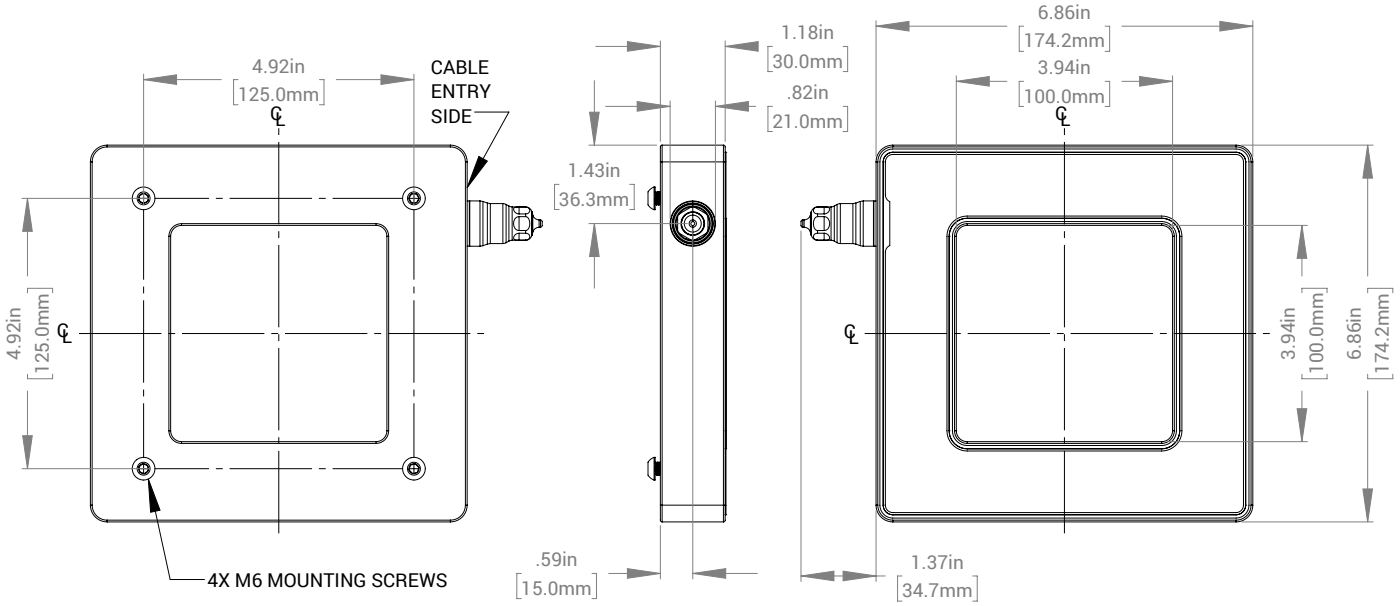
Photobiological Risk Factors

Group	Description	Affected Wavelengths
Exempt	No Photobiological Hazard	not defined
Group 1	No Photobiological hazard under normal behavioral limitations	not defined
Group 2	Does not pose a hazard due to aversion response to bright light or thermal discomfort	not defined

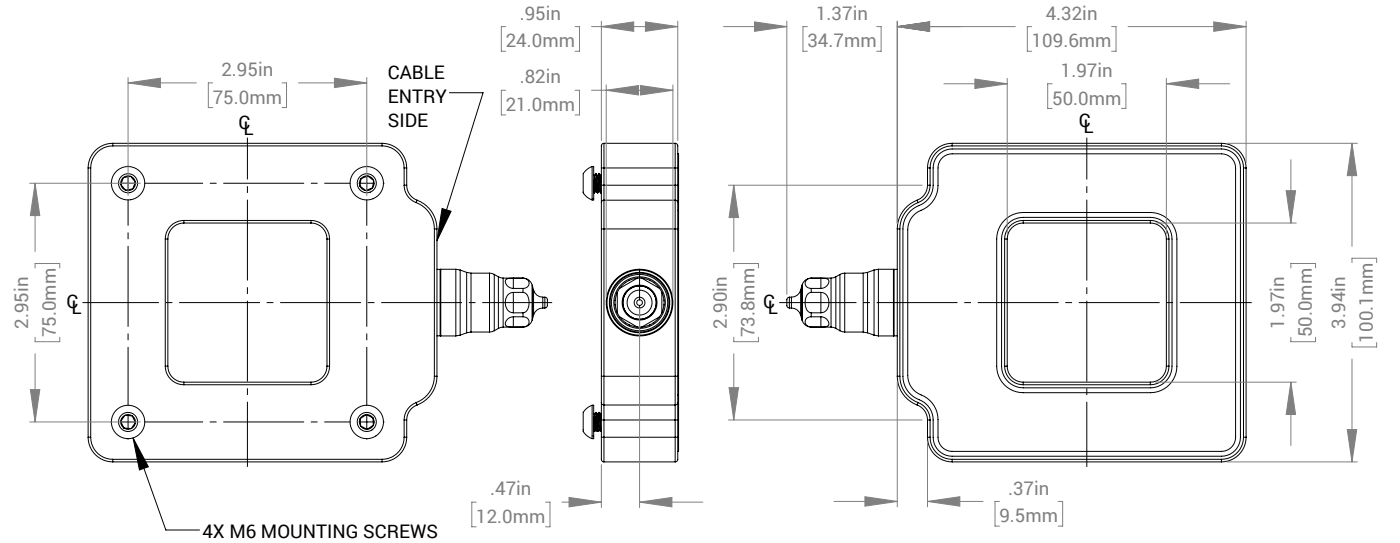
Mechanical Information

Installation Drawings

RL322-100



RL322-050



For full installation drawings and complete CAD models of this non-sealed configuration, please visit the downloads section of the product webpage.

Sizing Information

Available in two models, the RL322-050 (109.6 mm x 100.1 mm) and the RL322-100 (174.2 mm x 174.2 mm), both sizes can be equipped with M6 mounting points, allowing users to use the same fasteners for consistent mounting and easy interchangeability.

Each version offers a distinct inner opening size to fit around different machine vision cameras and inspection requirements. The 50 mm version is better suited for close-up working distances, delivering concentrated, high-intensity illumination due to its higher LED density, while the 100 mm version is better suited for larger targets and longer working distances, providing more uniform illumination and extended coverage.

Electrical Information

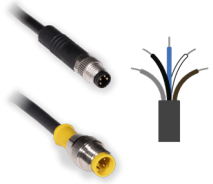
Power Requirements

Current Required for Power Supply Sizing

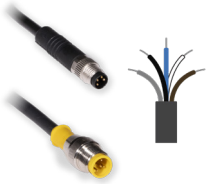
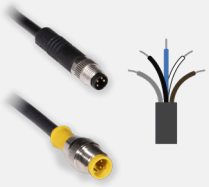
Wavelengths	Configured w/ Standard Controller (IC, I3, I3S, I4, EC, ES, C1, C5)	Configured w/ Voltage Drive (24V)
365 nm, 375 nm, 385 nm, 395 nm	900 mA / 600 mA (100 mm / 50 mm)	350 mA / 275 mA (100 mm / 50 mm)
WHI, 455 nm, 470 nm, 525 nm	900 mA / 600 mA (100 mm / 50 mm)	350 mA / 275 mA (100 mm / 50 mm)
625 nm, 660 nm, 730 nm	750 mA / 450 mA (100 mm / 50 mm)	250 mA / 175 mA (100 mm / 50 mm)

Note: All Advanced Illumination lights and controllers are nominally powered by 24V DC unless otherwise noted. Strobe overdriving with controller based models may require more current and voltage overhead. The values above do not include background current draw from the controller (~100 mA total).

Control Options

Controller Image	Controller Details	Connector Image
	**DCS Single Output Controller - Compatible with C1 Configurations** *PN: DCS-100E* The DCS-100E is a compact, din-rail mounted general-purpose external controller with one C1 output connector, wired with three channels. Capable of providing single channel control or multi-channel control for RGB compatible lights. **Output Power:** 90 W Max Continuous, 540 W Max Pulsed (Overdrive Strobe) **Output Current:** 4.5A Max Continuous, 15 A Max Pulsed **I/Os:** 3 External Trigger Inputs **Interface:** 10/100 Ethernet with Software and browser-based GUIs. SDKs are also available. For more information about our DCS-100E, please visit the controller product page.	
	**DCS Triple Output Controller - Compatible with C1 Configurations** *PN: DCS-103E* The DCS-103E is a din-rail mounted general-purpose multi-light controller with three C1 output connectors. Capable of driving three lights in sync or asynchronously. **Output Power:** 30 W Max Continuous / Output, 180 W Max Pulsed / Output **Output Current:** 1.5A Max Continuous / Output, 5 A Max Pulsed / Output **I/Os:** 3 External Trigger Inputs **Interface:** 10/100 Ethernet with Software and browser-based GUIs. SDKs are also available. For more information about our DCS-103E, please visit the controller product page.	
	**Embedded Controller - Continuous Only - EC Configurations** *PN: N/A* The EC is an embedded controller (within the light head) engineered for continuous or gated continuous operation. Allows for analog dimming functionality. **I/O:** 0 V - 10 V (10% to 100% intensity) Analog Dimming Input 2.5V Min - 30V Max, <=5mA Gating Signal Input for Gated Continous Operation **Interface:** Direct Cable (flying leads or optional M12 or M8 connectors)	
	**Embedded Controller - Strobe and Continuous - ES Configurations** *PN: N/A* The ES is an embedded controller (within the light head) engineered for both continuous and overdrive strobe operation, depending on the control functions operated. Allows for analog dimming functionality. **I/O:** 0 V - 10 V (10% to 100% intensity) Analog Dimming Input 2.5V Min - 30V Max, <=5mA Gating Trigger Signal Input for Gated Strobe Operation **Interface:** Direct Cable (flying leads or optional M12 or M8 connectors)	

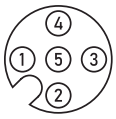
Electrical Information - Continued

Controller Image	Controller Details	Connector Image
	**Pulsar 320E High Current Controller - Compatible with C5 Configuration** *PN: Pulsar 320E* The Pulsar 320E is a high-power, dual output, pulse-only controller geared for overdriving driving lights at very short flash durations with very high current. **Output Power:** 2500 W Max Pulsed / Output **Output Current:** 50 A Max Pulsed / Output **I/Os:** 2 External Trigger Inputs **Interface:** 10/100 Ethernet with Software GUI. SDKs are also available. For more information about our Pulsar 320E, please visit the controller product page.	
	**Inline Controller - Continuous Only - IC Configurations** *PN: N/A* The IC is an inline, cable-mounted continuous-only controller configured/wired directly for the ordered light head. **Output Power:** 25 W Max Continuous **Output Current:** 1.25 A Max Continuous **I/O:** 1 0-10 V Analog Dimming Input **Interface:** Direct Cable (flying leads or optional connector) For more information about our IC Controller please visit the controller product page.	
	**Inline Controller - Strobe and Continuous - I3 & I3S Configurations** *PN: N/A* The I3 and I3S are inline, cable-mounted continuous and pulse (overdrive strobe) capable controllers configured/wired directly for the ordered light head. When operated in pulsed mode, the I3 is a default-on device on power up, whereas the I3S is default-off, requiring a trigger to illuminate. **Output Power:** 25 W Max Continuous, 125 W Max Pulsed **Output Current:** 1.25 A Max Continuous, 8 A Max Pulsed (Load Dependent) **I/Os:** 1 Gated Trigger Signal, 1 0-10 V Analog Dimming Input **Interface:** Direct Cable (flying leads or optional connector) For more information about our I3/I3S Controller, please visit the controller product page.	
	**Inline Controller - Strobe and Continuous - I4 Configurations** *PN: N/A* The I4 is an inline, cable-mounted continuous and pulse (overdrive strobe) capable controller configured/wired directly for the ordered light head. The I4 can either be operated with a PNP or NPN trigger signal. **Output Power:** 50 W Max Continuous, 150 W Max Pulsed **Output Current:** 2.1 A Max Continuous, 8 A Max Pulsed (Load Dependent) **I/Os:** 1 Gated Trigger Signal, 1 0-10 V Analog Dimming Input **Interface:** Direct Cable (flying leads or optional connector) For more information about our IC Controller please visit the controller product page.	

Electrical Information - Continued

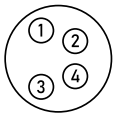
Embedded and Inline Control Option Wiring Information

Standard Flying Lead and Optional M12 Connector Pinout Functions

Pin (M12)	Wire Color	24V Functions	IC Functions	I3/I3S/EC/ES Functions	I4 Functions	M12 Pinout
1	BROWN	24V DC	24V DC	24V DC	24 V DC	 5-Position Male Connector
2	WHITE	N/A	0-10V Analog Control	Reserved	NPN/Active Low Trigger	
3	BLUE	DC GND	DC GND	DC GND	DC GND	
4	BLACK	N/A	Gate Low	PNP/Active High Signal	PNP/Active High Trigger	
5	GRAY	N/A	N/A	0-10V Analog Control	0-10 V Analog Dimming	

The functions above are only applicable when ordering an 24, IC, I3, I3S, EC, ES, or I4 power configuration with our without an M12 connector. For more wiring information pertaining to strobing and dimming functionality, please download the controller manuals and datasheets.

Optional M8 Connector Pinout Functions

Pin (M8)	Wire Color	24V Functions	IC Functions	I3/I3S/EC/ES Functions	I4 Functions	M8 Pinout
1	BROWN	24V DC	24V DC	24V DC	24 V DC	 4-Position Male Connector
2	WHITE	N/A	0-10V Analog Control	Reserved	Active Low Trigger	
3	BLUE	DC GND	DC GND	DC GND	DC GND	
4	BLACK	N/A	Gate Low	Active High Signal	Active High Trigger	

The functions above are only applicable when ordering an 24, IC, I3, I3S, EC, ES, or I4 power configuration with our without an M12 connector. For more wiring information pertaining to strobing and dimming functionality, please download the controller manuals and datasheets.

Accessories

Advanced Illumination offers a variety of accessories designed to pair with our lighting and control products. Below you will find a table of accessories which are compatible with many configurations of the RL322 Series.

Category	Accessory Image	Accessory Detail
Power Supply		**24 Volt DC Power Supply** *PN: PS24-TL* This convenient power source is a universal AC input switching power supply with a regulated output DC current. The power supply comes with an LED Power Indicator, tinned leads marked Positive (+) and Negative (-) and 2 WAGO connectors for simplified assembly. For more information about our 24 Volt DC Power Supply, please visit this webpage.
Dimmer		**Manual Dimming Accessory for the IC, I3 and I3s** *PN: DCS-MP* The DCS-MP is a 30-position potentiometer, detented for precision level control and provides repeatable dimming with cable inline controllers. Features include DIN-rail mountable, a flip up cover to prevent accidental adjustments, spring clamp wiring terminal for flying leads or an M12 connector for use with the IC or I3/I3S Inline Controllers. For more information about our Manual Dimming Accessory please visit this webpage.

Electrical Information - Continued

Category	Accessory Image	Accessory Detail
Dimmer		**Manual Dimming Accessory for the IC** *PN: MP-ICS* The MP-ICS is a dimmer which is designed for use on lights with the IC Inline Controller. This unit provides for 0 – 100% intensity control. It is NOT COMPATIBLE with LLI37, BLI38, LLI67, and BLI68 "IC" Lights or lights built with the "24v controller" option. For more information about our Manual Dimming Accessory, please visit this webpage.
Extension Cable		**DCS-100E/103E Extension Cable, Single Light Power Cable - C1 Configuration** *PN: LC-XX-S* This extension cable was designed for applications requiring power cables longer than the standard 2 meters provided with Ai lights. This single light cable features a single male and single female 7 pin locking connector (C1) and can be purchased in 3 - 15-meter lengths. For more information about our DCS-100E/103E Extension Cable, Single Output, please visit this webpage.
Extension Cable		**Pulsar 320E Extension Cable - C5 Configuration** *PN: LC-XX-S-C5* This extension cable was designed for applications requiring power cables longer than the standard 2 meters provided with Ai lights. This single light cable features a single male and single female Pulsar 320 connector (C5) and can be purchased in 3 - 15 meter lengths. For more information about our Pulsar 320E Extension Cable, please visit this webpage.
Adaptor Cable		**Cognex Gen2 Inline Controller Adaptor Cable** *PN: AD-I3-CGX2* This cable adaptor is for connecting I3/I3S/EC/ES configured lights with Cognex Gen2 Cameras, and comes with a male to female M12 connectors. For more information about our Cognex Gen2 Inline Controller Adaptor Cable, please visit this webpage.
Filters		**Camera Lens Band Pass FIlters** *PN: BPXXX-YYY* Eliminating all but a narrow band of light (+/- 40nm) centered on the specified wavelength, band pass filters are used to enhance colors, or to stop unwanted ambient light from reaching the camera. Filtering can replace existing shrouds, simplifying the physical set up of an inspection site. Ai offers 635nm and 660nm band pass filters to fit several different lens sizes. For more information about our Camera Lens Band Pass FIlters, please visit this webpage.

Additional Information

Warranty

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty. No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental,

Compliancy

Our lighting products are designed and tested to meet CE, RoHS, and IEC standards. As a global ISO 9001 certified company, we understand the importance of compliance and perform accelerated testing on every product before shipment. For more information on our compliance standards, please

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation,

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to

Company Information

Advanced Illumination
440 State Garage Road, Rochester, VT 05767
Phone: +1 (802) 767 3830
Fax: +1 (802) 767 2636
Email: info@advancedillumination.com
Web: advancedillumination.com

RL36120

Large Aimed Bright Field

Product Highlights

- The RL36120 is characterized as a Large Aimed Bright Field ring light.
- Precisely aimed LEDs provide a level of lighting control not found in traditional illuminators.

General Specifications

Electrical Specifications	Color	24V Current	All Other Controls
	625, 660, 880	0.6A	0.3A Max
	395, 470, 520, WHI, RGB	0.4A	0.2A Max
Normal Operating Temperature	0 - 60°C		
Weight	312.1g (11.01oz) - standard mounting option		
Standard Cable Information	2 m long -0/+150 mm (80" -0/+6") - 105°C rated PVC jacket, foil shield with drain.		
Photobiological Risk Factor	Exempt Applicable Wavelengths: 880 Group 1 (Low-Risk) Applicable Wavelengths: 470, 520, 625, 660, WHI, RGB Group 2 (Moderate-Risk) Applicable Wavelengths: 395		
Compliance	CE, RoHS, IEC 62471		
IP Rating	IP40		
Lumen Maintenance	L70 = 50,000 Hours		

Part Number Key

Model	Mounting Options	–	Peak Wavelength	Stand Off (mm)	Illuminated Field of View (mm)	Connector/ Control	Light Conditioning Option	–	Alternative Connector
RL36120	X	–	XXX	XXX	XXX	XX	X	–	XXX
RL36120	S (Standard) B (Barrel)		395 (UV)[3] 470 (blue) 520 (green) 625 (red orange) 660 (red) 880 (IR) WHI (white) RGB (all colors)[2]	See chart to compute stand off	XS S M L XL XXL	C1 C5 IC I3 I3S 24	D (Diffuser) P[4] (Polarizer)		M8[1] M12[1]

EX:
RL36120B-395100XXLC1D
RL36120S-625200XLI3P-M12

[1] Available with IC, I3, I3S, and 24 V options only
[2] Available with C1, C2, and 24 V options only
[3] Not available with IC or 24 V
[4] Not available with 395 (UV) options; 470 (blue) will reduce the life of the polarizer

See website product page for in-stock product numbers.

Shipping:
Stock Products: within three days
Build-to-Order Products: within one to three weeks

Change Notice

PCN No: 166

Date Issued: May 5, 2023
Notice Type: Product Change
Product Type: 660nm Wavelength on traditional 5mm Lights Discontinuation

Change Notification Summary

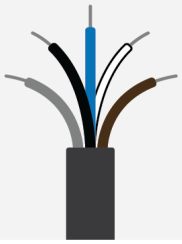
Advanced illumination (Ai) will be ending the manufacture of the 660nm color option on our classic aimed lights due to the LEDs being discontinued from the manufacturer. We expect to have six months of inventory to fulfill orders, after that we suggest purchasing the same light but with the 625nm wavelength.

Please contact your Ai Sales Representative if you have any questions.

PCN 166

Electrical Specs

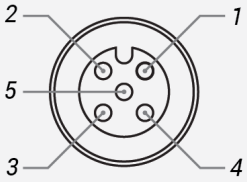
Standard Flying Lead Functions for 24V, IC, I3 and I3S Control Options



COLOR	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
BROWN	24 V DC	24 V DC	24 V DC
WHITE	N/A	0-10 V ANALOG DIMMING	RESERVED
BLUE	DC GND	DC GND	DC GND
BLACK	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
GRAY	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **without** the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.*

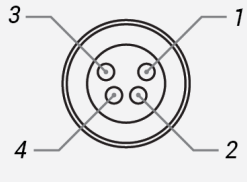
M12 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	RESERVED
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
5	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 5-position Male M12 connector.*

M8 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



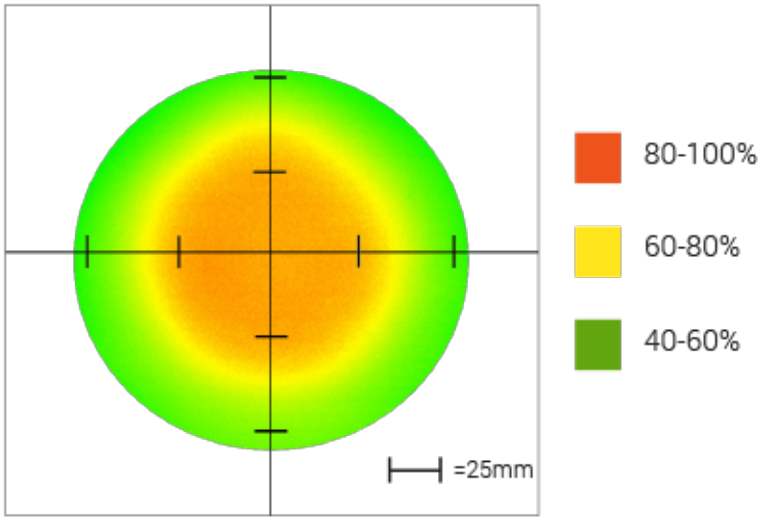
PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 4-position Male M8 connector.*

For details on operating configurations without built-in control (C1, C5, Q1, and Q4 control, when available), please refer to Advanced illumination's controller manuals.

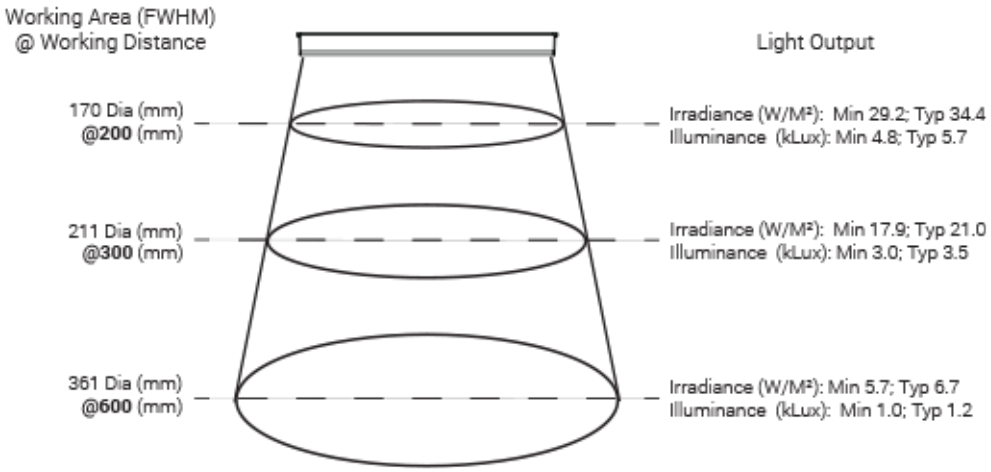
Optical Specs

Intensity Distribution

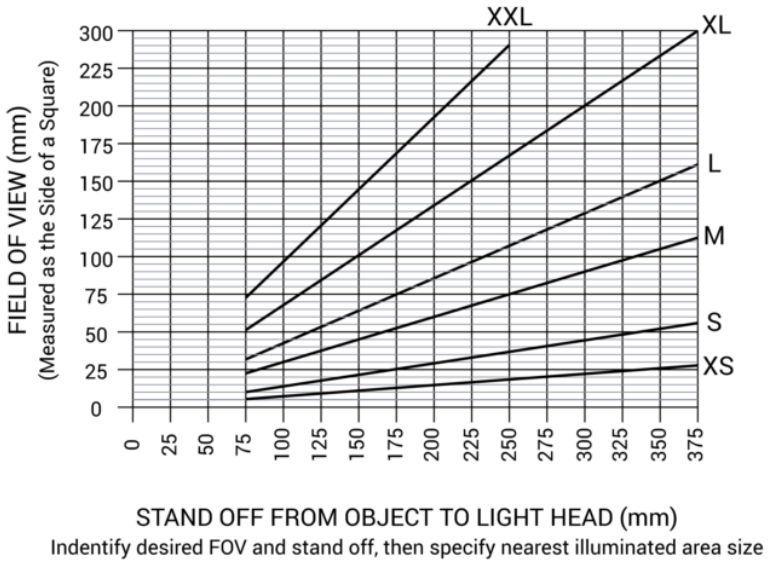


Optical measurement taken using RL36120-625200XLIC @ 300 mm

Area of Illuminance & Intensity



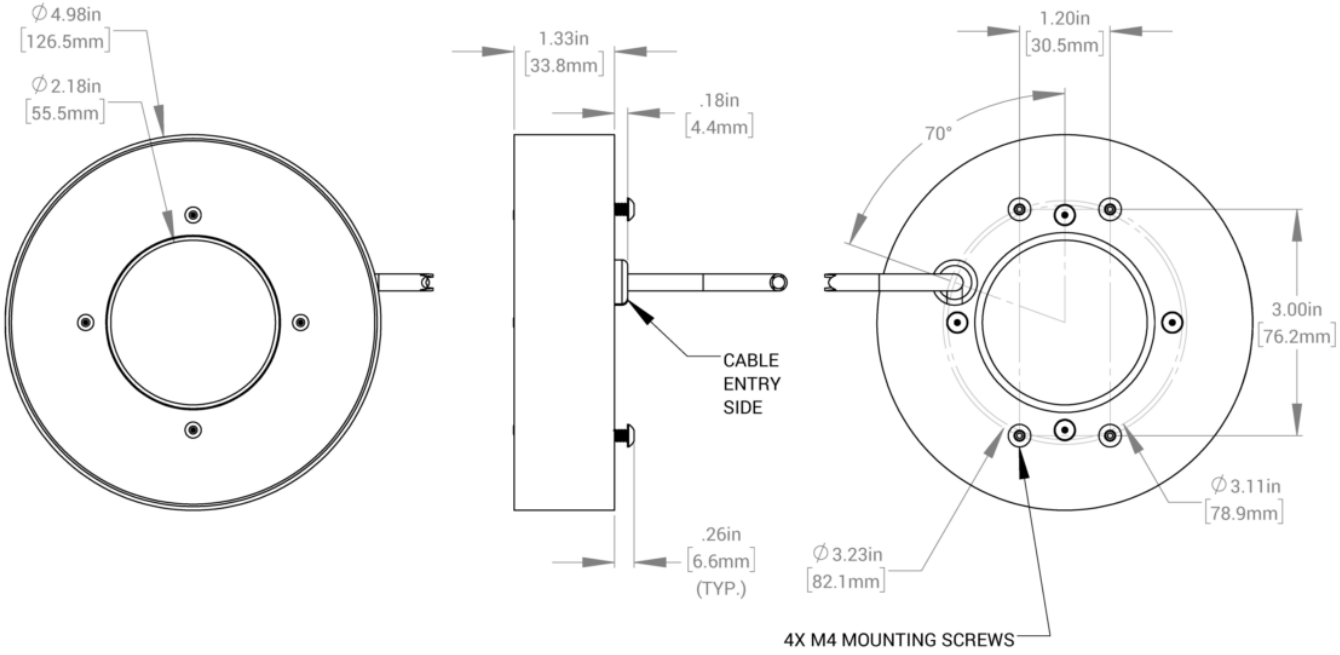
[FIELD OF VIEW CHART]



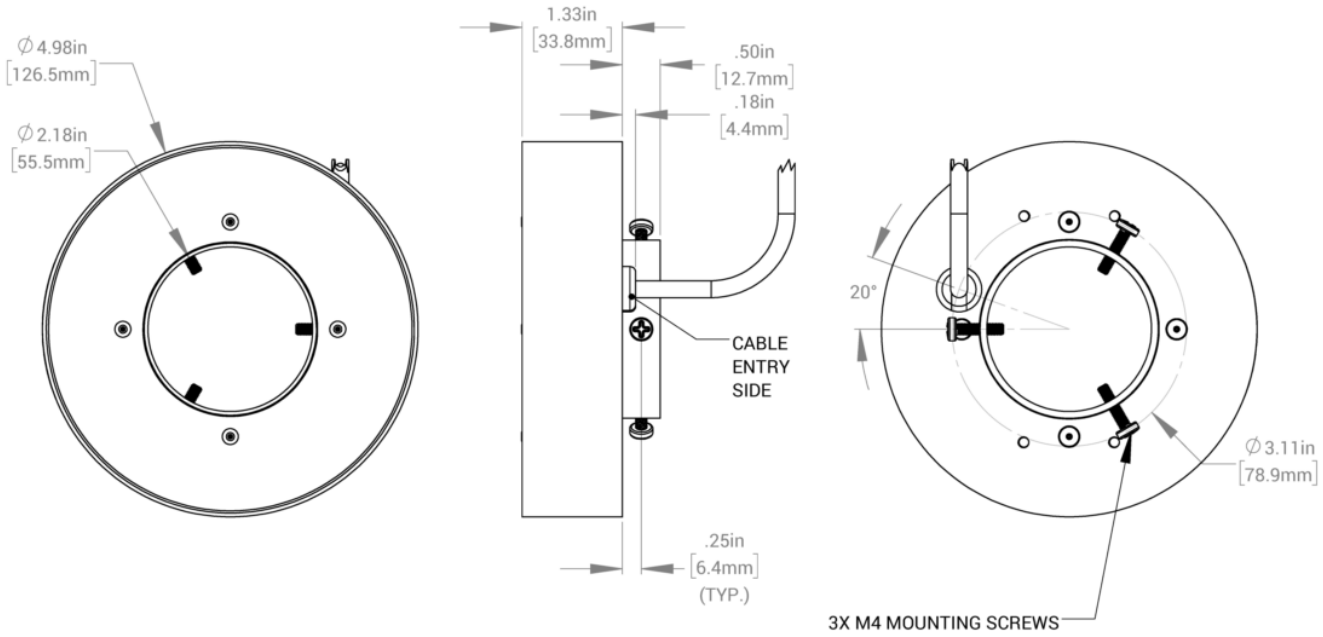
Indentify desired FOV and stand off, then specify nearest illuminated area size

Mechanical Specs

[RL36120 - STANDARD MOUNTING OPTION]



[RL36120 - MOUNTING OPTION B]



Control Specs

C1 Connector	C5 Connector	ICS 2 (IC)	ICS 3 (I3)	ICS 3S (I3S)	24
For use with: **DCS Series Controllers**	*For use with:* **Pulsar 320 Strobe Controller.**	Continous in-line controller *Powered with:* **24V power supply**	Combination strobe/continous in-line controller *Powered with:* **24V power supply**	Default-OFF strobe/continous in-line controller *Powered with:* **24V power supply**	Flying/tinned leads *Powered with:* **24V power supply**

Warranty Information

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty.
No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

Company Information

Advanced Illumination
440 State Garage Road, Rochester, VT 05767
Phone: 802.767.3830
Fax: 802.767.2636
Email: info@advancedillumination.com
Web: advancedillumination.com

RL4260

Medium Aimed Bright Field

Product Highlights

- The RL4260 is characterized as a Medium Aimed Bright Field ring light.
- Precisely aimed LEDs provide a level of lighting control not found in traditional illuminators.

General Specifications

Electrical Specifications	Color	24V Current	All Other Controls
	625, 660, 880	0.36A	0.15A Max
	395, 470, 520, WHI, RGB	0.24A	0.10A Max
Normal Operating Temperature	0 - 60°C		
Weight	192.8g (6.8oz)		
Standard Cable Information	2 m long -0/+150 mm (80" -0/+6") - 105°C rated PVC jacket, foil shield with drain.		
Photobiological Risk Factor	Exempt Applicable Wavelengths: 880 Group 1 (Low-Risk) Applicable Wavelengths: 470, 520, 625, 660, WHI, RGB Group 2 (Moderate-Risk) Applicable Wavelengths: 395		
Compliance	CE, RoHS, IEC 62471		
IP Rating	IP40		
Lumen Maintenance	L70 = 50,000 Hours		

Part Number Key

Model	Mounting Options	–	Peak Wavelength	Stand Off (mm)	Illuminated Field of View (mm)	Connector/ Control	Light Conditioning Option	–	Alternative Connector
RL4260	X	–	XXX	XXX	XXX	XX	X	–	XXX
RL4260	S (Standard) B (Barrel)		395 (UV)[3] 470 (blue) 520 (green) 625 (red orange) 660 (red) 880 (IR) WHI (white) RGB (all colors)[2]	See chart to compute stand off	XS S M L XL XXL	C1 C5 IC I3 I3S 24	D (Diffuser) P[4] (Polarizer)		M8[1] M12[1]

EX:
RL4260B-395100XXLC1D
RL4260S-625200XLI3P-M12

[1] Available with IC, I3, I3S, and 24 V options only
[2] Available with C1, C2, and 24 V options only
[3] Not available with IC or 24 V
[4] Not available with 395 (UV) options; 470 (blue) will reduce the life of the polarizer

See website product page for in-stock product numbers.

Shipping:
Stock Products: within three days
Build-to-Order Products: within one to three weeks

Change Notice

PCN No: 166

Date Issued: May 5, 2023
Notice Type: Product Change
Product Type: 660nm Wavelength on traditional 5mm Lights Discontinuation

Change Notification Summary

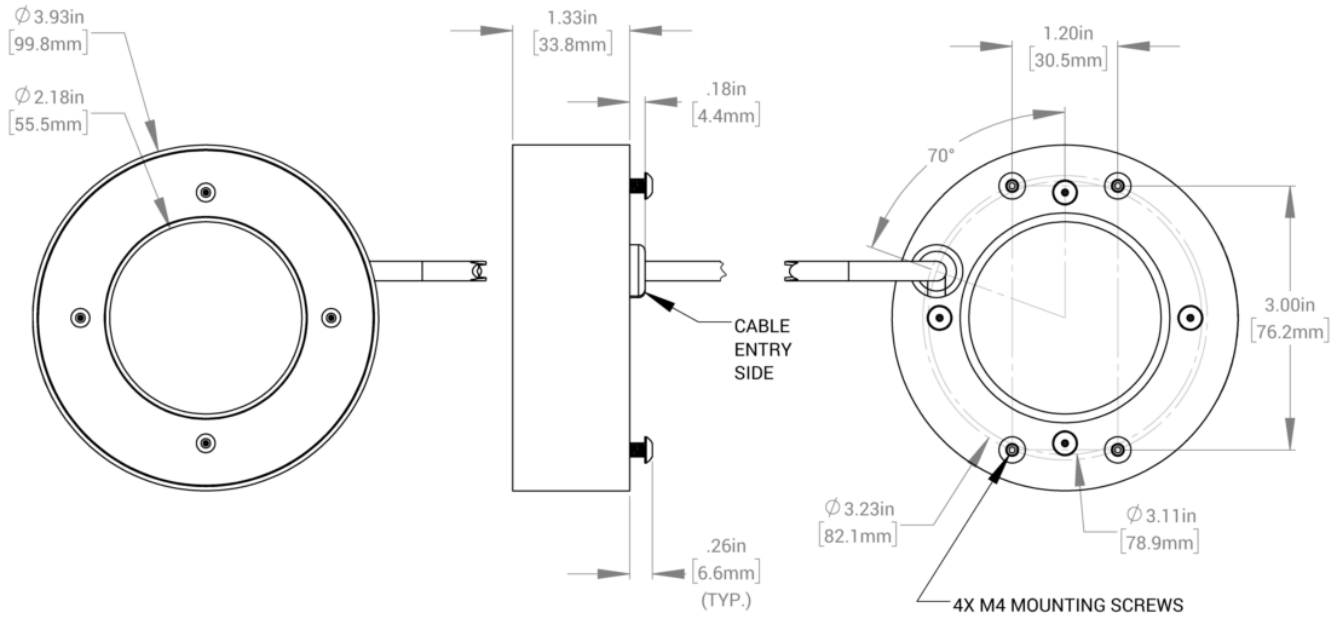
Advanced illumination (Ai) will be ending the manufacture of the 660nm color option on our classic aimed lights due to the LEDs being discontinued from the manufacturer. We expect to have six months of inventory to fulfill orders, after that we suggest purchasing the same light but with the 625nm wavelength.

Please contact your Ai Sales Representative if you have any questions.

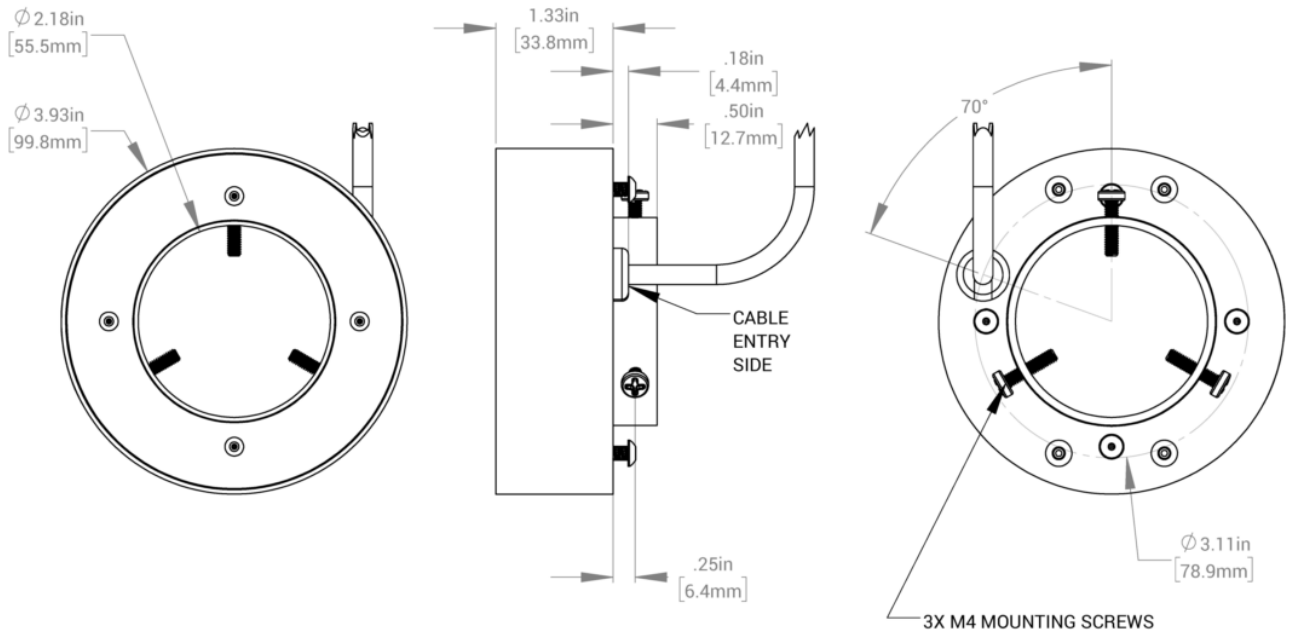
PCN 166

Mechanical Specs

[RL4260 - STANDARD MOUNTING OPTION]

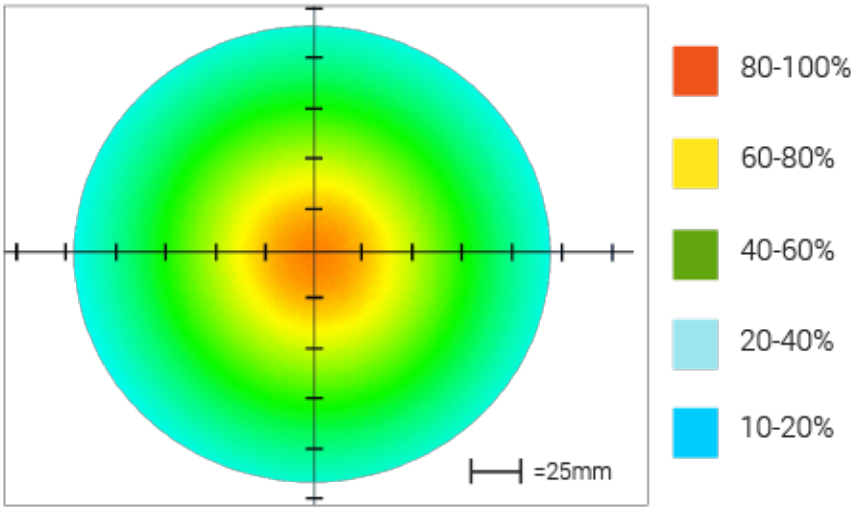


[RL4260 - MOUNTING OPTION B]



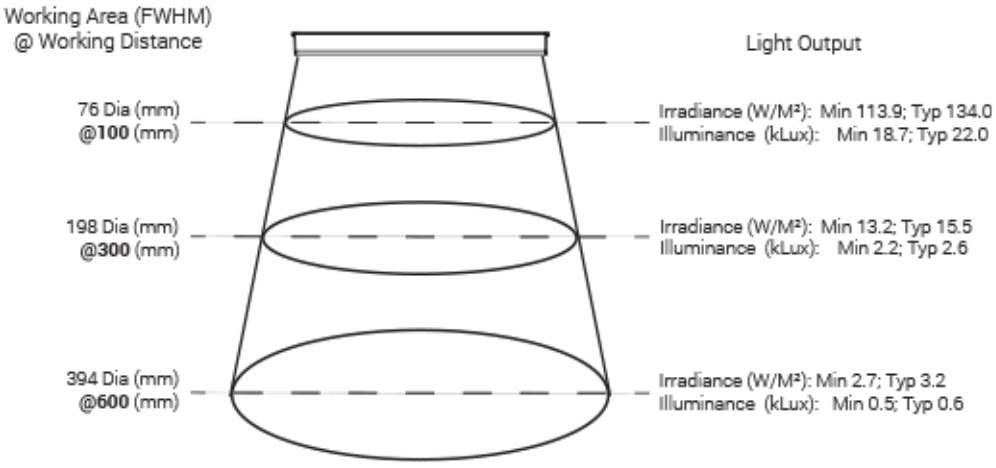
Optical Specs

Intensity Distribution

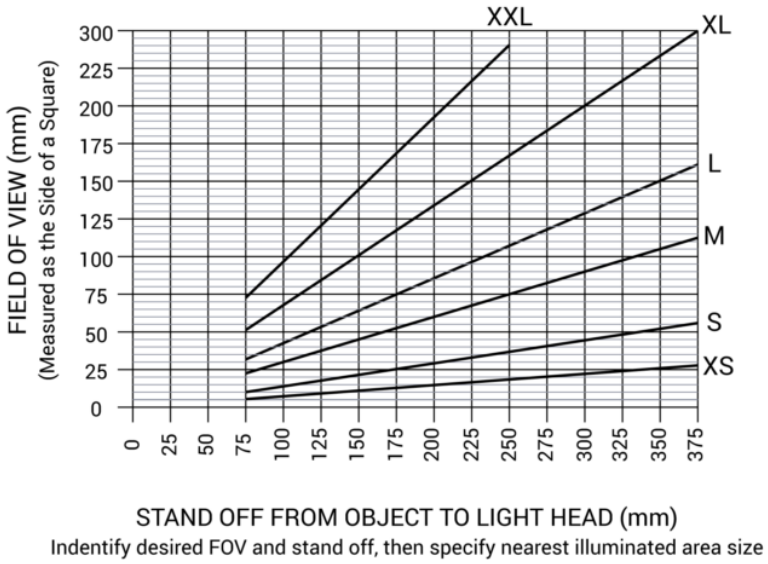


Optical measurement taken using RL4260-625100Li3 @ 300 mm

Area of Illuminance & Intensity



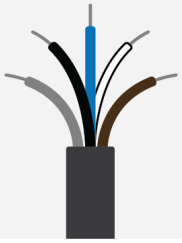
[FIELD OF VIEW CHART]



Indentify desired FOV and stand off, then specify nearest illuminated area size

Electrical Specs

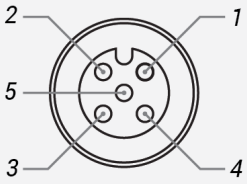
Standard Flying Lead Functions for 24V, IC, I3 and I3S Control Options



COLOR	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
BROWN	24 V DC	24 V DC	24 V DC
WHITE	N/A	0-10 V ANALOG DIMMING	RESERVED
BLUE	DC GND	DC GND	DC GND
BLACK	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
GRAY	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **without** the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.*

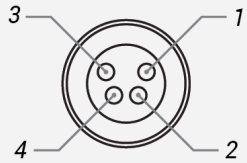
M12 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	RESERVED
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
5	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 5-position Male M12 connector.*

M8 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 4-position Male M8 connector.*

For details on operating configurations without built-in control (C1, C5, Q1, and Q4 control, when available), please refer to Advanced illumination's controller manuals.

Control Specs

C1 Connector	C5 Connector	ICS 2 (IC)	ICS 3 (I3)	ICS 3S (I3S)	24
For use with: **DCS Series Controllers**	*For use with:* **Pulsar 320 Strobe Controller.**	Continous in-line controller *Powered with:* **24V power supply**	Combination strobe/continous in-line controller *Powered with:* **24V power supply**	Default-OFF strobe/continous in-line controller *Powered with:* **24V power supply**	Flying/tinned leads *Powered with:* **24V power supply**

Warranty Information

Every Advanced illumination, Inc. (Ai) product is thoroughly inspected and tested before leaving the factory. Products are warranted to be free of defects in workmanship and materials for a period of FIVE YEARS from the original date of purchase. Should a defect develop during this period, customers may return the complete product, freight prepaid, to one of Ai's distributors or to the Ai factory. All product warranty returns require a Return Merchandise Authorization (RMA) number which is obtained from Customer Service. The RMA number must be clearly marked on the outside of the package. Ai will inspect the unit, and if a defect is found will, at our option, repair or replace the product without charge. Ai disclaims liability for any implied warranties, including implied warranties of "merchantability" and "fitness for a specific purpose." For products under warranty that have since been discontinued, Ai will make an effort to replace with equivalent parts; for circumstances that do not allow for equivalent replacement, Ai reserves the right to repair or replace these products with an updated version. Ai cannot be held responsible for the unauthorized or inappropriate use of its products. Any unauthorized repair or modifications will result in a voided warranty.
No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Customer Service

For information on existing orders, or to make an order adjustment, contact us Monday through Friday 8:00 am to 5:00 pm ET or send an email to orders@advancedillumination.com.

Company Information

Advanced Illumination
440 State Garage Road, Rochester, VT 05767
Phone: 802.767.3830
Fax: 802.767.2636
Email: info@advancedillumination.com
Web: advancedillumination.com

RL5064

Dual Function Ring Light

Product Highlights

- Characterized as a Dual Function Ring Light, the RL5064 is capable of both bright and dark field illumination with independent control (depending on control option).
- A wide variety of wavelengths may be specified from UV to IR.
- The large inner diameter of the ring light can accommodate lenses up to 55mm in diameter.
- The light can also be ordered with an optional 3 point mounting barrel.

General Specifications

Electrical Specifications	Color	24V Current Bright Field	24V Current Dark Field	All Other Controls Bright Field	All Other Controls Dark Field
	625, 660, 880	0.12 A	0.24 A	0.04 A	0.12 A
	WHI	0.08 A	0.16 A	0.027 A	0.08 A
	470	0.08 A	0.17 A	0.027 A	0.09 A
	520	0.08 A	0.18 A	0.027 A	0.10 A
	395	0.08 A	0.19 A	0.027 A	0.11 A
Normal Operating Temperature	0 - 60°C				
Weight	273.1g (9.6 oz) for standard mounting option				
Standard Cable Information	2 m long -0/+150 mm (80" -0/+6") - 105°C rated PVC jacket, foil shield with drain.				
Photobiological Risk Factor	Exempt Applicable Wavelengths: 880 Group 1 (Low-Risk) Applicable Wavelengths: 470, 520, 625, 660, WHI Group 2 (Moderate-Risk) Applicable Wavelengths: 395				
Compliance	CE, RoHS				
IP Rating	Not Rated				

Lumen Maintenance	L70 = 50,000 hours

Part Number Key

Model	Mounting Options	–	Peak Wavelength	Connector/ Control	–	Alternative Connector
RL5064	X	–	XXX	XX	–	XXX
RL5064	S (Standard) B (Barrel)		395 (UV) 470 (blue) 520 (green) 625 (red orange) 660 (red) 880 (IR) WHI (white)	C1 C5 IC I3 I3S 24		M8[1] M12[1]

EX:
RL5064B-395C1
RL5064-625I3-M12

[1] Available with IC, I3, I3S, and 24 V options only
[2] Not available in IC or 24 V option

See website product page for in-stock product numbers.

Shipping:
Stock Products: within three days
Build-to-Order Products: within one to three weeks

Change Notice

PCN No: 166

Date Issued: May 5, 2023
Notice Type: Product Change
Product Type: 660nm Wavelength on traditional 5mm Lights Discontinuation

Change Notification Summary

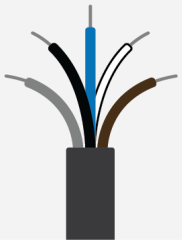
Advanced illumination (Ai) will be ending the manufacture of the 660nm color option on our classic aimed lights due to the LEDs being discontinued from the manufacturer. We expect to have six months of inventory to fulfill orders, after that we suggest purchasing the same light but with the 625nm wavelength.

Please contact your Ai Sales Representative if you have any questions.

PCN 166

Electrical Specs

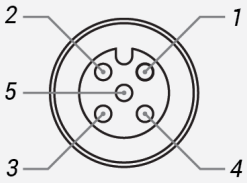
Standard Flying Lead Functions for 24V, IC, I3 and I3S Control Options



COLOR	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
BROWN	24 V DC	24 V DC	24 V DC
WHITE	N/A	0-10 V ANALOG DIMMING	RESERVED
BLUE	DC GND	DC GND	DC GND
BLACK	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
GRAY	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **without** the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.*

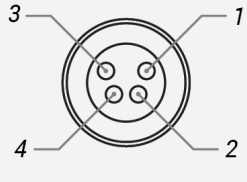
M12 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	RESERVED
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER
5	N/A	N/A	0-10 V ANALOG DIMMING

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 5-position Male M12 connector.*

M8 Connector Pinout Functions for 24V, IC, I3 and I3S Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS
1	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING
3	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER

*The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, or I3S control, **with** an A-coded 4-position Male M8 connector.*

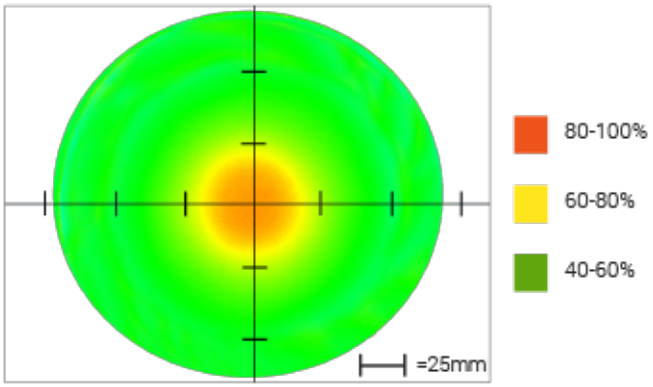
For details on operating configurations without built-in control (C1, C5, Q1, and Q4 control, when available), please refer to Advanced illumination's controller manuals.

Control Specs

C1 Connector	C5 Connector	ICS 2 (IC)	ICS 3 (I3)	ICS 3S (I3S)	24
For use with: **DCS Series Controllers**	*For use with:* **Pulsar 320 Strobe Controller.**	Continous in-line controller *Powered with:* **24V power supply**	Combination strobe/continous in-line controller *Powered with:* **24V power supply**	Default-OFF strobe/continous in-line controller *Powered with:* **24V power supply**	Flying/tinned leads *Powered with:* **24V power supply**

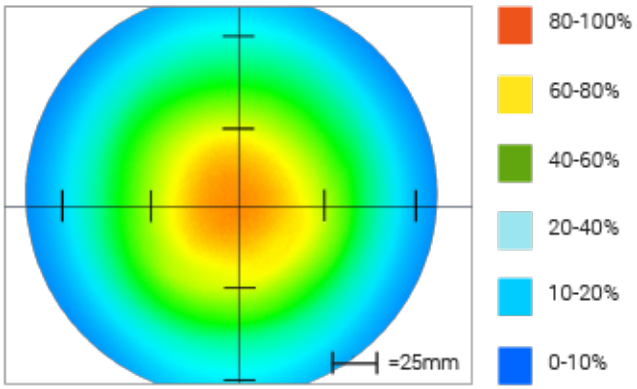
Optical Specs

Dark Field Intensity Distribution



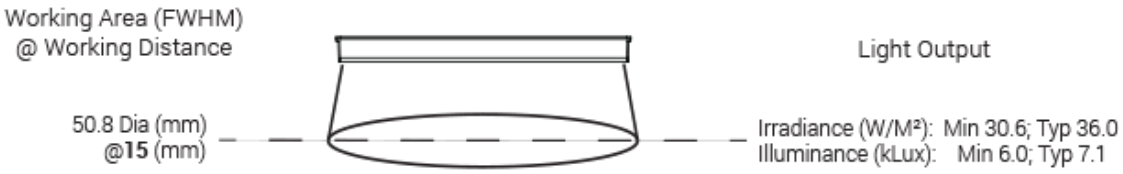
Optical measurement taken using
RL5064-625I3 @ 15 mm Dark Field

Bright Field Intensity Distribution

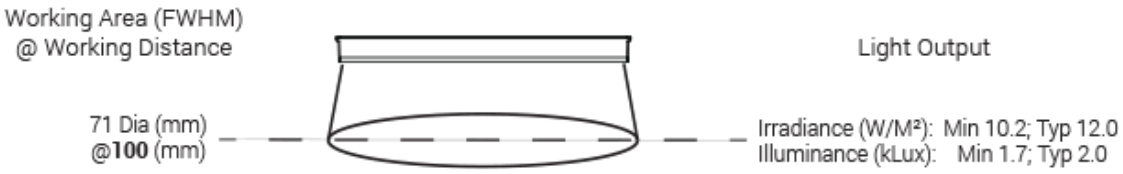


Optical measurement taken using
RL5064-625I3 @ 15 mm Bright Field

Dark Field Area of Illuminance & Intensity

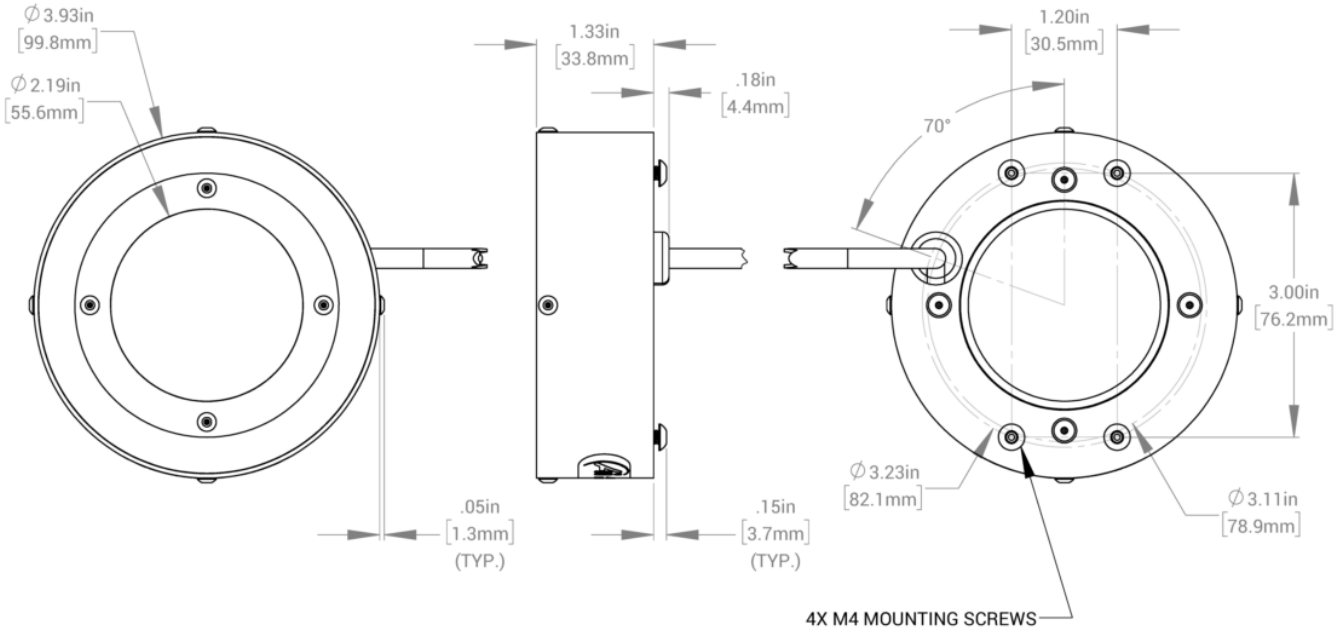


Bright Field Area of Illuminance & Intensity

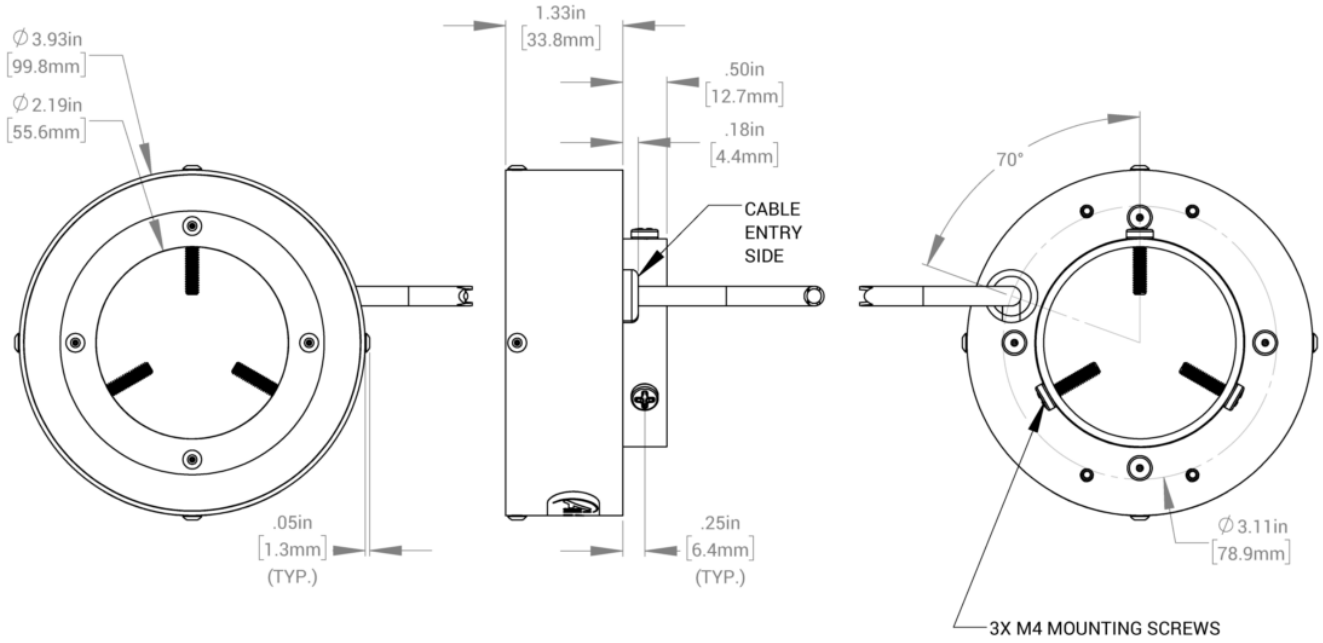


Mechanical Specs

[RL5064 - STANDARD MOUNTING OPTION]



[RL5064 - MOUNTING OPTION B]



Warranty Information

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No Liability for Consequential Damages: In no event shall Ai be liable for any consequential, special, incidental, or indirect damages of any kind arising from the sale or use of the products.

Electromagnetic Compatibility

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference only when the product is operated in its intended industrial electromagnetic environment. To minimize the potential for electromagnetic interference or unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

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Company Information

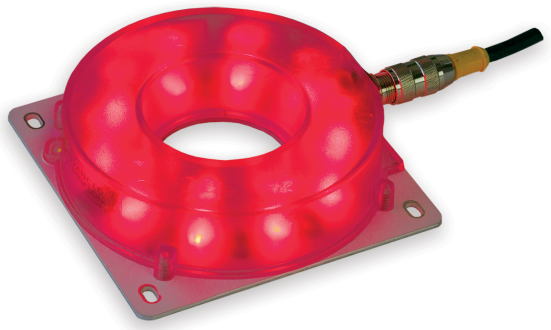
Advanced Illumination
440 State Garage Road, Rochester, VT 05767
Phone: 802.767.3830
Fax: 802.767.2636
Email: info@advancedillumination.com
Web: advancedillumination.com

RL-S052120

EuroBrite™ Ring Light

Product Highlights

- This EuroBrite™ ring light provides high-intensity illumination at a competitive price point.
- Refer to the full description for more detail.



General Specifications

Electrical Specifications	Color	Current	All Other Controls
	455, 470, 505, 530, 590, 625, 660, 730, 850, 940, WHI	~0.54A	N/A
Input Voltage Range	24V nom. (min 22/max 28)		
Maximum Input Current	0.42-0.49A		
Strobe/On-Off Control	Up to 5X overdrive, active high		
Analog Intensity Control	Analog 0.7-10V; 0.7V=10% 10V=100%		
Trigger-to-Pulse Latency	10µsec		
Normal Operating Temperature	0 - 60°C		
Weight	172.4g (6.1oz)		
Standard Cable Information	No cable included; see part number LC2-M12-5-FX or use standard coded 5-pin M12.		
Photobiological Risk Factor	Exempt Applicable Wavelengths: 850, 940 Group 1 (Low-Risk) Applicable Wavelengths: 455, 470, 505, 530, 590, 625, 660, 730, WHI		

Compliance	CE, RoHS, IEC 62471
IP Rating	IP67
Lumen Maintenance	L70 = 50,000 Hours

Part Number Key

Model	–	Mode	Inner Diameter (mm)	Outer Diameter (mm)	Lens Type	–	Peak Wavelength
RL	–	X	XXX	XXX	X	–	XXX
RL		S (Strobe)	052	120	M (Medium) W (Wide)		455 (royal blue)[5] 470 (blue)[5] 505 (cyan) 530 (green) 590 (amber) 625 (red orange) 660 (red) 730 (IR) 850 (IR) 940 (IR) WHI (white)

EX:
RL-S052120W-625
RL-S052120M-WHI

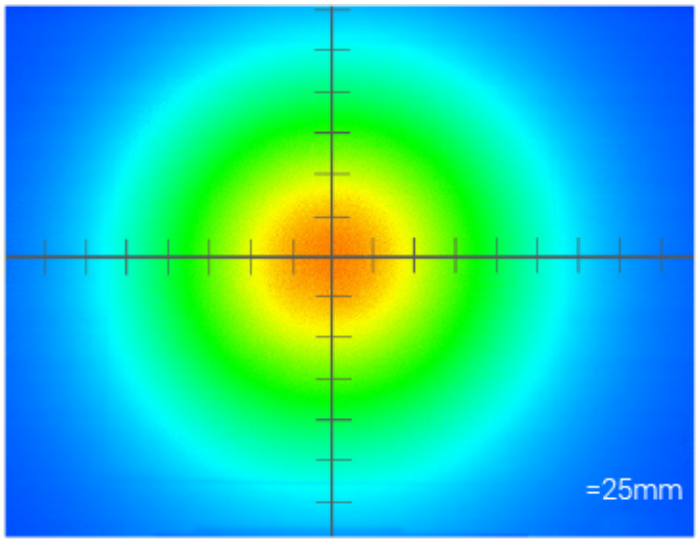
Beam Angle (FWHM):
Medium = 21°
Wide = 32°

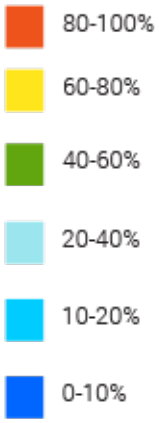
See website product page for in-stock product numbers.

Shipping:
Stock Products: within three days
Build-to-Order Products: within one to three weeks

Optical Specs

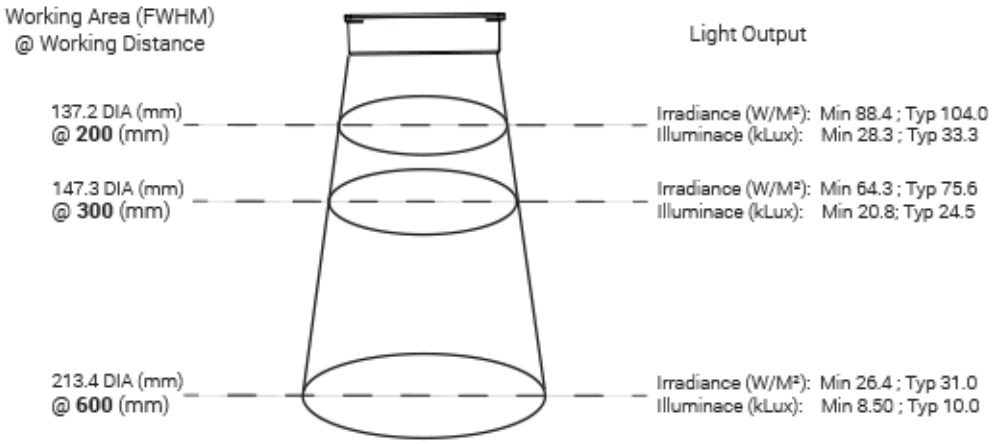
Intensity Distribution





Optical measurement taken using RL-S052120M-WHI @ 300 mm

Area of Illuminance & Intensity



Electrical Specs

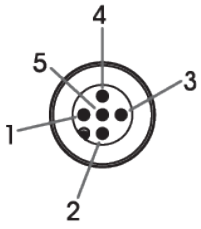
Modes of Operation

Continuous	Strobe	Thermal Foldback	Factory Reset
To enable output: Tie Trigger+ (black) HIGH to >0.5V. The light remains ON as long as Trigger+ is high Analog dimming is available during continuous mode operation: pin 5, gray	EuroBrite™ S-version uses Adaptive Overdrive™ to produce overdrive pulses while the Trigger+ is HIGH. Overdrive period occurs for all trigger pulses, but only during the first 5 mSec for those pulse widths longer than 5 mSec; light output can be increased by as much as 5x. Overdriving does not occur when pulses exceed 5 mSec. Analog dimming is available during strobe mode operation: pin 5, gray	To engage Thermal Foldback: Before turning the light on, tie pin 2 (white) to pin 3 (GND, blue). Onboard thermistor is sampled for 5 minutes. Light intensity will automaticaly adjust based on the case tempurature during the training period. The beginning of training is signified by a series of rapid flashes. While training, the light will blink every two seconds. A few slower blinks signal the end of the training period	To engage Factory Reset: Before turning the light on, tie pin2 (white) to pin 3 (blue). For factory reset to occur, the light must be trained for thermal foldback first. Light will appear dim for 3-5 seconds then brightness will be set to factory default. After factory reset is complete disconnect white wire from blue wire for normal operation (before turning light back on). Tying pin 2 (white) to pin 3 (blue) will alternate between factory reset and thermal foldback modes.

Standard Wiring Information

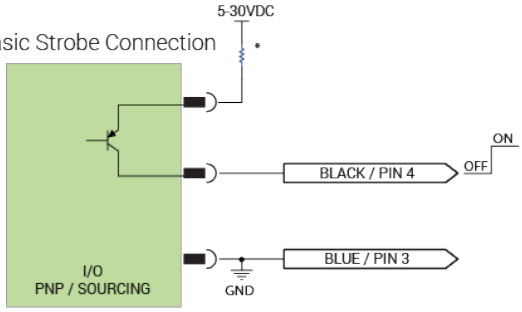
Pin	Function	Wire Color	Type
1	24VDC	Brown	Power
2	Thermal Foldback	White	Input
3	GND	Blue	Power
4	Trigger +	Black	Input
5	Analog	Gray	Input

Male 5-Position



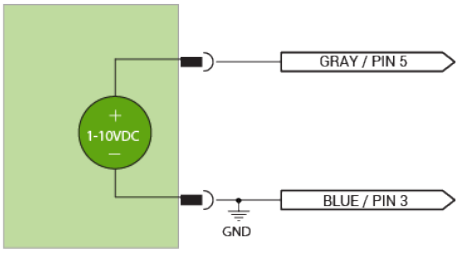
Wiring Diagrams

Basic Strobe Connection



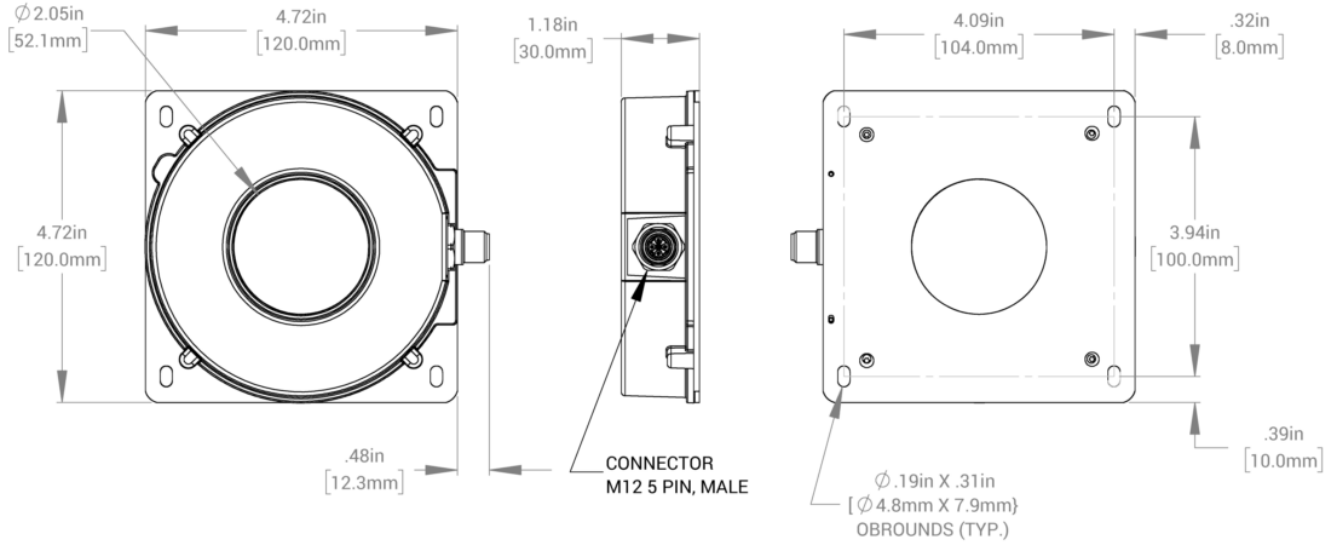
*External resistors may not be needed
Check documentation on I/O for recommendations and voltage limits

Analog Dimming



Analog dimming works in both strobe and continuous

Mechanical Specs



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