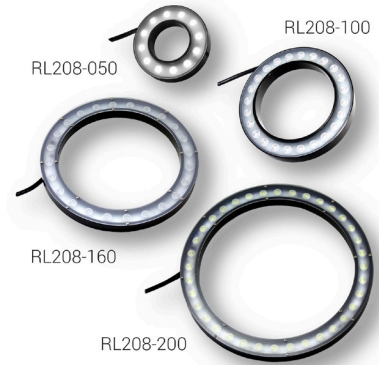# MicroBrite™ RL208 Series
High Performance Bright Field Ring Lights

Product Highlights

- Provides stable and even light source

- Used to evenly illuminate a variety of surfaces for color or defect detection

- Available in four sizes: 50, 100, 160, and 200mm

- Broad range of wavelengths available

RL208-050
RL208-100
RL208-160
RL208-200

General Specifications

	Part Number[1]	Color	24v Current	All Other Controls
Electrical Specifications	RL208X-050	365, 375, 385, 395, 405	0.12 A	0.32 A Max
		625 , 660	0.12 A	0.28 A Max
		WHI, 455, 470, 505, 530, 590	0.14 A	0.47 A Max
		730, 850, 940	0.12 A	0.22 A Max
	RL208X-100	365, 375, 385, 395, 405	0.24 A	0.58 A Max
		625, 660	0.23 A	0.57 A Max
		WHI, 455, 470, 505, 530, 590	0.27 A	0.79 A Max
		730, 850, 940	0.24 A	0.43 A Max
	RL208X-160	365, 375, 385, 395, 405	0.24 A	0.62 A Max
		625 , 660	0.23 A	0.66 A Max
		WHI, 455, 470, 505, 530, 590	0.27 A	0.98 A Max
		730, 850, 940	0.24 A	0.54 A Max
	RL208X-200	365, 375, 385, 395, 405	0.36 A	0.87 A Max
		625, 660	0.36 A	0.66 A Max
		WHI, 455, 470, 505, 530, 590	0.40 A	0.98 A Max
		730, 850, 940	0.36 A	0.54 A Max
Normal Operating Temperature	0 - 60°C			
Weight (Kg)	Varies by size			
Standard Cable Information	Up to 2 meters (80") long - 105°C rated PVC jacket, foil shield with drain.			
Photobiological Risk Factor IEC 62471	**Exempt Applicable Wavelengths:** 850, 940 **Group 1 (Low-Risk) Applicable Wavelengths:** 455, 470, 505, 530, 590, 625, 660, 730, WHI **Group 2 (Moderate Risk) Applicable Wavelengths:** 365, 375, 385, 395, 405			
Compliance	CE RoHS IEC 62471			
IP Rating	IP50			
Lumen Maintenance	L70 = 50,000 hours			

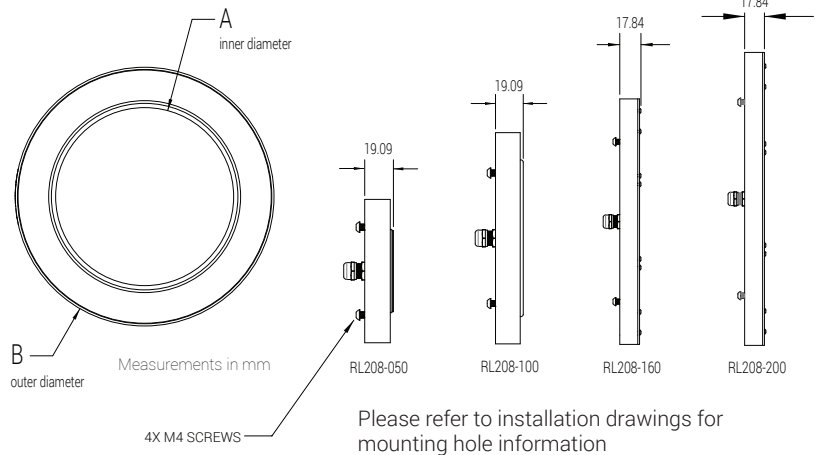[1] "X" refers to lens option. See part number key for more information.

Mechanical Specifications

Part Number[1]	A Measurement (mm)	B Measurement (mm)
RL208X-050	50.0	95.34
RL208X-100	100.0	145.34
RL208X-160	160.0	206.87
RL208X-200	200.0	246.87

[1] "X" refers to lens option. See part number key for more information.

A
inner diameter

B
outer diameter

Measurements in mm

4X M4 SCREWS

19.09   19.09   17.84   17.84

RL208-050   RL208-100   RL208-160   RL208-200

Please refer to installation drawings for mounting hole information

Part Number Key

Model	Lens[3] Option	—	Size in mm	Spectral Wavelength	Connector/ Control	—	Alternative Connector
RL208	X	—	XXX	XXX	XX	—	XXX
RL208	M (medium) W[4] (wide)		050 100 160 200	(UV) 365 (UV) 375 (UV) 385 (UV) 395 (violet) 405 (royal blue) 455 (blue) 470 (cyan) 505 (green) 530 (amber) 590 (red orange) 625 (red) 660 (infra-red) 730 (infra-red) 850 (infra-red) 940 (white) WHI	C1 C5 IC I3 I3S 24[2]		M12[1]

Ex: RL208M-050WHIC1
RL208W-200625IC-M12

[1] Available with IC, I3 and I3S options only
[2] The 24v version will have a lower output intensity by ~10-15% and operate at a temp ~10-15% higher than other options
[3] Beam angle (FWHM):
 M = 21°
 W = 32°
[4] Not available with UV options

**Stock Product:** *shipped within 3 days*
RL208M-100WHIIC

Build to Order: *shipped within 2 weeks*

Connector | Control Options

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 Performance

Intensity Distribution

80-100%

60-80%

40-60%

⊢——⊣ = 25mm
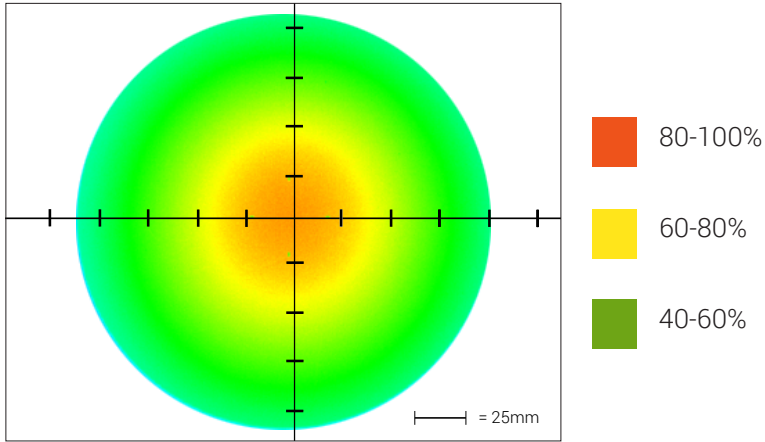
Optical measurement taken using RL208M-100WHIIC @ 300mm

Area of Illuminance & Intensity

Working Area (FWHM)
@ Working Distance

Light Output

188.0 (mm)
@**178** (mm)
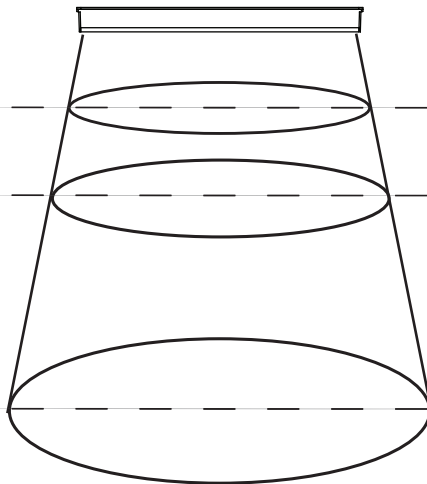
Irradiance (W/M²): Min 107.1; Typ 126.0
Illuminance (kLux): Min 35.1; Typ 41.4

213.3 (mm)
@**300** (mm)

Irradiance (W/M²): Min 63.1; Typ 74.3
Illuminance (kLux): Min 20.6; Typ 24.3

337.8 (mm)
@**600** (mm)

Irradiance (W/M²): Min 21.3; Typ 25.1
Illuminance (kLux): Min 7.0 ; Typ 8.3

Product Revision "A"

Optical Performance

Area of Illuminance & Intensity for RL208M-WHI

Medium Lens

Part Number	Working Distance (mm)	Illuminance (klux)	Irradiance (W/m²)	FWHM Diameter (mm)
RL208M-050	100	57.7	177.0	101.6
	300	15.7	47.7	177.8
	600	4.50	13.4	330.2
RL208M-100	178	41.4	126.0	188.0
	300	24.3	74.3	213.3
	600	8.30	25.1	337.8
RL208M-160	230	22.0	70.0	279.4
	300	20.0	62.0	292.1
	600	9.0	27.0	386.0
RL208M-200[1]	300	15.0	46.0	342.9
	450	11.3	33.2	386.0
	600	8.0	23.0	431.8

[1] Values shown represent an estimated 30% increase to prior version.

Operation and Wiring

ICS 2 (IC)

Pin (M12)	Function	Wire Color
1	+24 VDC	Brown
2	0-10 VDC Analog Control	White
3	GND	Blue
4	GLO	Black
5	N/A	Gray

ICS 3 (I3 and I3S)

Pin (M12)	Function	Wire Color
1	+24 VDC	Brown
2	Reserved	White
3	GND	Blue
4	PNP/Active High Trigger	Black
5	0-10 VDC Analog Control	Gray

24 Volt

Pin (M12)	Function	Wire Color
1	+24 VDC	Brown
2	N/A	White
3	-24 VDC	Blue
4	N/A	Black
5	N/A	Gray

Optional M12 Pinout

male
5-position
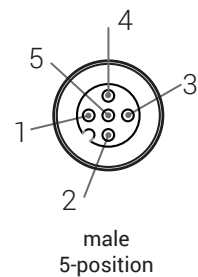
Warranty Information

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 two years from the original date of purchase. Should a defect develop during this period, please contact Ai Customer Service or your Ai distributor for a Return Merchandise Authorization (RMA), and return the complete product, freight prepaid, to Ai. If a defect is found, Ai will - at our discretion - repair or replace the product without charge. Ai claims no liability for any implied warranties, including "merchantability" and "fitness for a specific purpose."

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@advill.com.

Company Information

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