DF196

MicroBrite™ Direct Dark Field Series

Product Highlights

- Our MicroBrite™ DF196 Series delivers direct illumination at a low angle to cast shadows used to identify surface defects, embossed text, etc.
- This dark field ring light is more directional and less diffuse than the DF198.



General Specifications

	Part Number	Color	24V Current	All Other Controls
Electrical Specifications	DF196-050	625	N/A	0.16 A Max
	DF196-050	455, 530, WHI	N/A	0.27 A Max
	DF196-050	RGB	N/A	0.07 A Max
	DF196-100	625	0.7 A	0.32 A Max
	DF196-100	455, 530, WHI	0.7 A	0.54 A Max
	DF196-100	RGB	N/A	2.1 A Max
	DF196-180	625	1.25 A	0.58 A Max
	DF196-180	455, 530, WHI	1.25 A	0.97 A Max
	DF196-180	RGB	N/A	2.9 A Max
	DF196-280	625	1.25 A	0.58 A Max
	DF196-280	455, 530, WHI	1.25 A	0.97 A Max
	DF196-280	RGB	N/A	5.0 A Max
Normal Operating Temperature	0 - 60°C			

Weight	DF196-050: 83.9g (2.96oz) DF196-100: 263.1g (9.3oz) DF196-180: 521.6g (18.4oz) DF196-280: 780.2g (27.5oz)
Standard Cable Information	2 m long -0/+150 mm (80" -0/+6") - 105°C rated PVC jacket, foil shield with drain.
Photobiological Risk Factor	Group 1 (Low Risk) Applicable Wavelengths: 455, 530, 625, RGB, WHI
Compliance	CE, RoHS, IEC 62471
IP Rating	IP40
Lumen Maintenance	L70 = 50,000 Hours

Part Number Key

Model	–	Outer Diameter (mm)	Illuminated Field of View (mm)	Connector/ Control	–	Alternative Connector
DF196	–	XXX	XXX	XX	–	XXX
DF196		050[2]	455 (royal blue)	C1		M8[1]
		115	520 (green)	C5		M12[1]
		180	625 (red)	IC		
		280	WHI (white)	I3		
			RGB (all colors)[3]	I3S		
				24		

EX:
DF196-115WHII3
DF196-180625C1

[1] Available with IC, I3, I3S, and 24 V options only
[2] Not available in 24 V option
[3] Available with C1 connector only

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: 167

Date Issued: October 10, 2022
Notice Type: LED Change
Product Type: DF196-RGB and DF198-RGB Lights

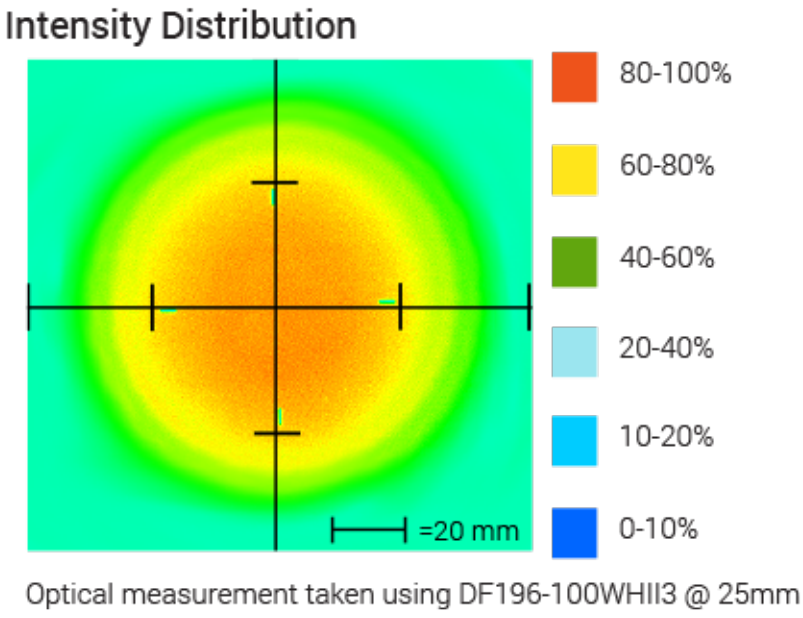
Change Notification Summary

Due to the discontinuation of the LEDs used in these products, Advanced illumination (Ai) needs to update the LED to a current model. This change will occur immeditally.

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

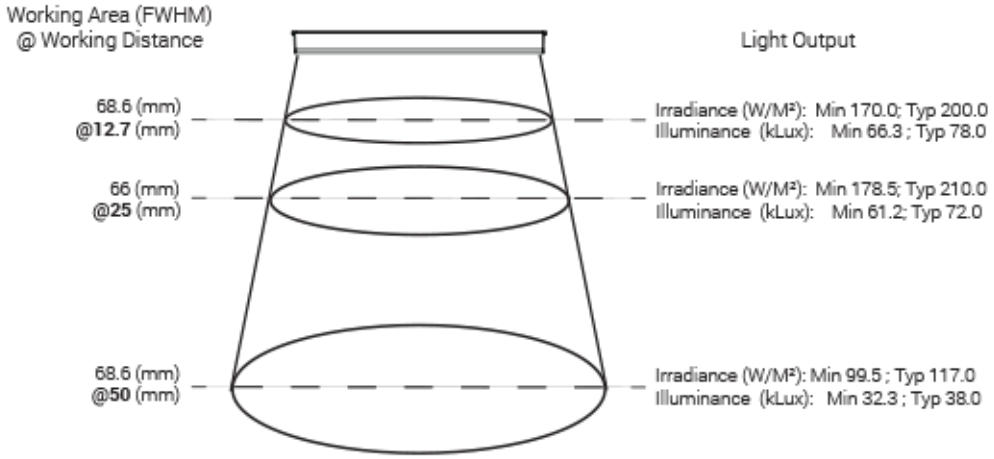
PCN167

Optical Specs



Optical measurement taken using DF196-100WHII3 @ 25mm

Area of Illuminance & Intensity for DF196-100WHI

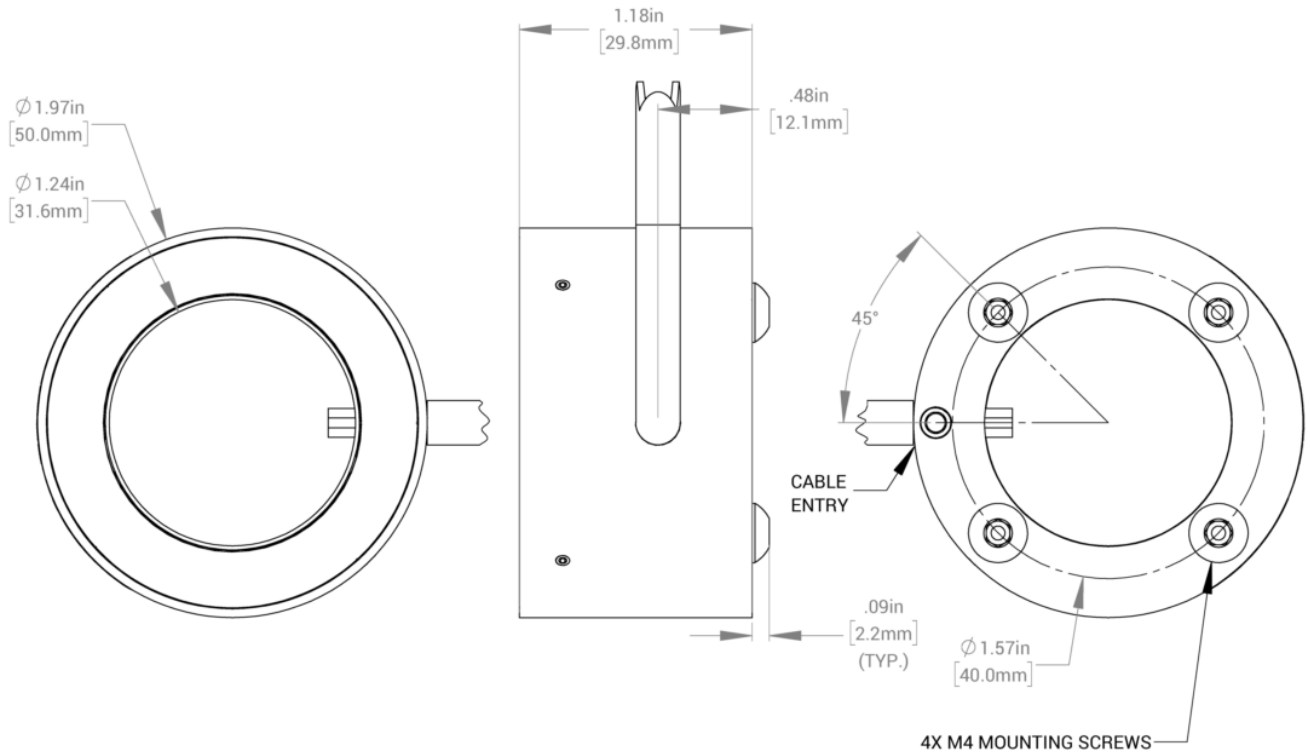


Area of Illuminance & Intensity for All DF196-WHII3

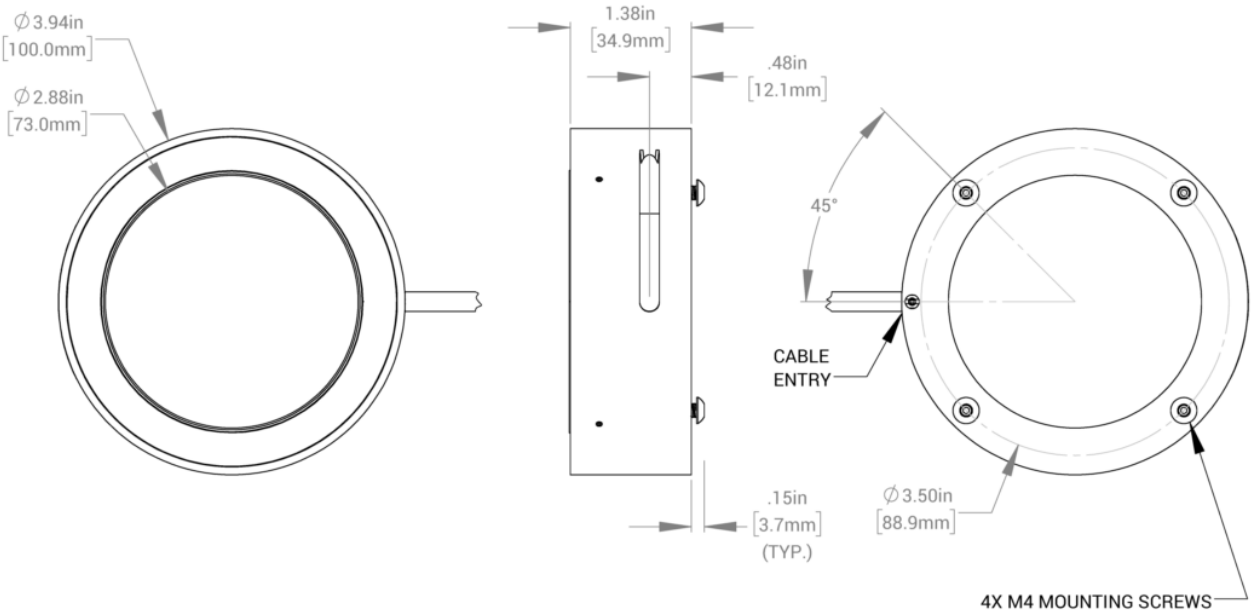
Part Number	Working Distance (mm)	Irradiance (klux)	Illuminance (W/m2)	FWHM Diameter (mm)
DF196-050	6.5	550	194	30.5
	20	300	90.2	35.6
DF196-100	12.7	200	78	68.6
	25	210	72	66.0
	50	117	38	68.6
DF196-180	50	134	46.5	134.6
	125	43.6	14.5	172.7
	190	17.9	5.9	254
DF196-280	75	47	17.2	228.6
	200	17.3	5.8	279.4
	300	7.4	2.5	431.8

Mechanical Specs

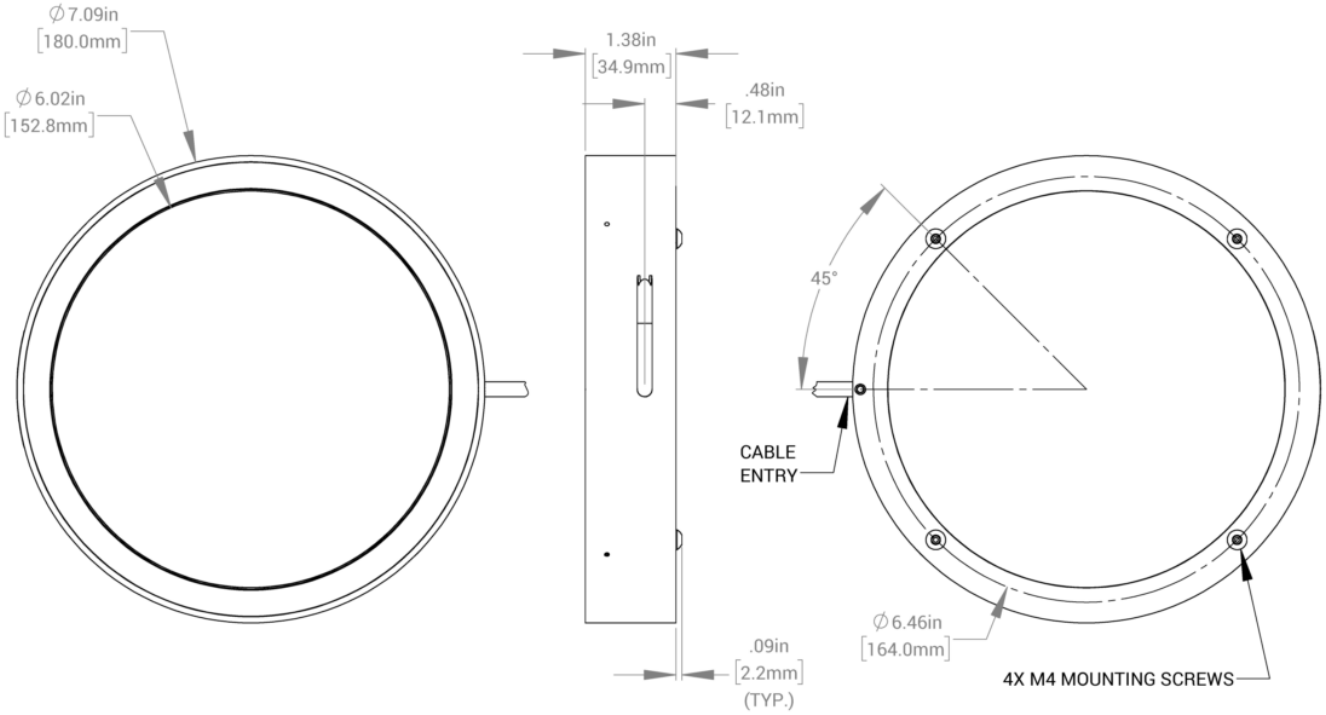
[DF196-050]



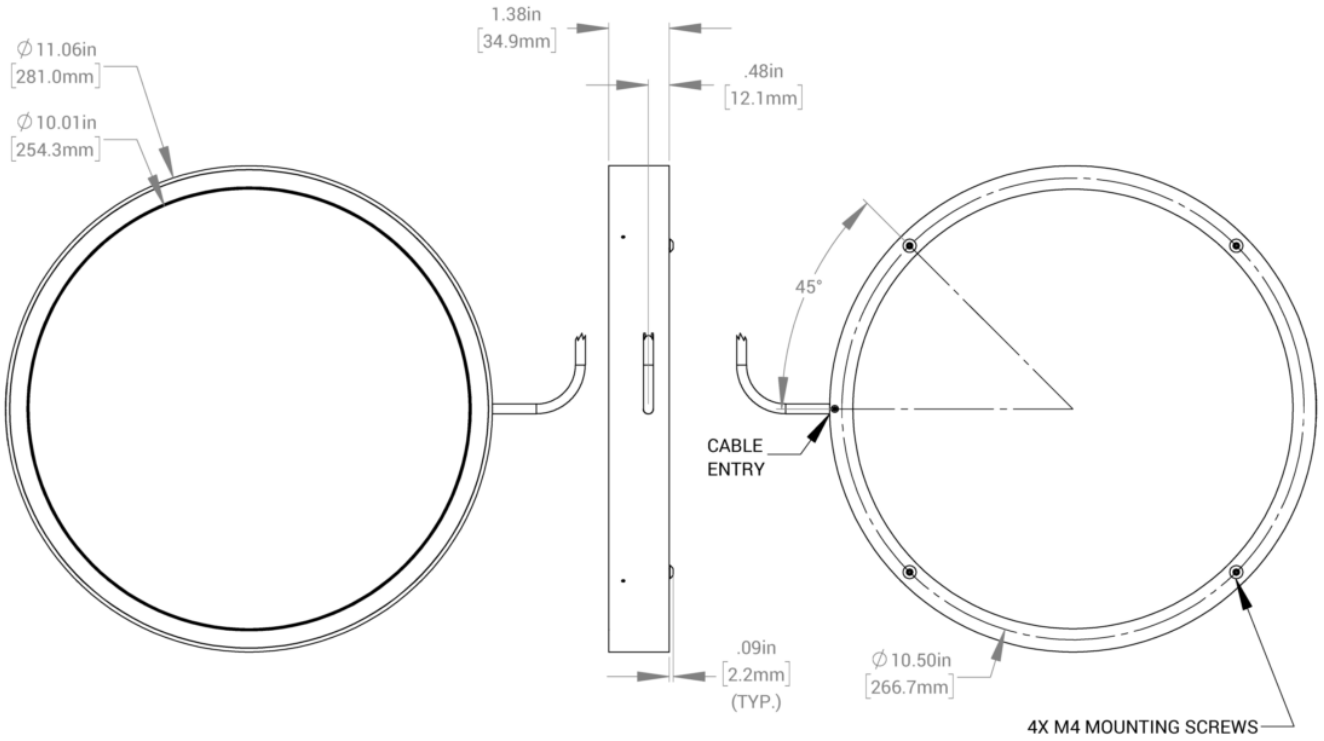
[DF196-100]


∅3.94in
[100.0mm]
∅2.88in
[73.0mm]
1.38in
[34.9mm]
.48in
[12.1mm]
45°
CABLE
ENTRY
.15in
[3.7mm]
(TYP.)
∅3.50in
[88.9mm]
4X M4 MOUNTING SCREWS

[DF196-180]

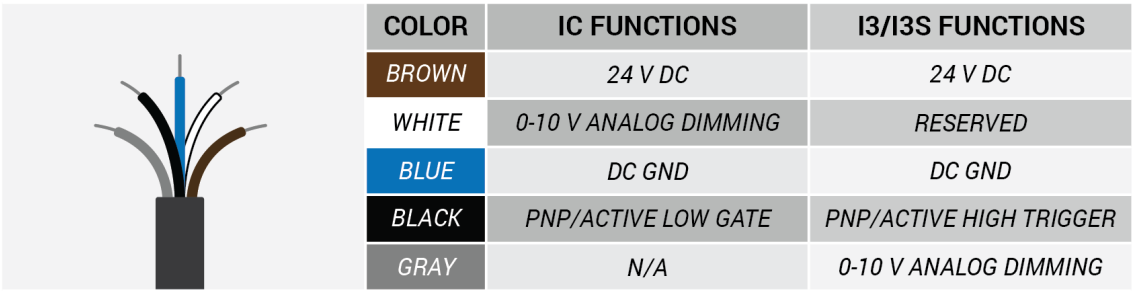

∅7.09in
[180.0mm]
∅6.02in
[152.8mm]
1.38in
[34.9mm]
.48in
[12.1mm]
45°
CABLE
ENTRY
∅6.46in
[164.0mm]
.09in
[2.2mm]
(TYP.)
4X M4 MOUNTING SCREWS

[DF196-280]


1.38in
[34.9mm]
.48in
[12.1mm]
∅11.06in
[281.0mm]
∅10.01in
[254.3mm]
45°
CABLE
ENTRY
.09in
[2.2mm]
(TYP.)
∅10.50in
[266.7mm]
4X M4 MOUNTING SCREWS

Electrical Specs

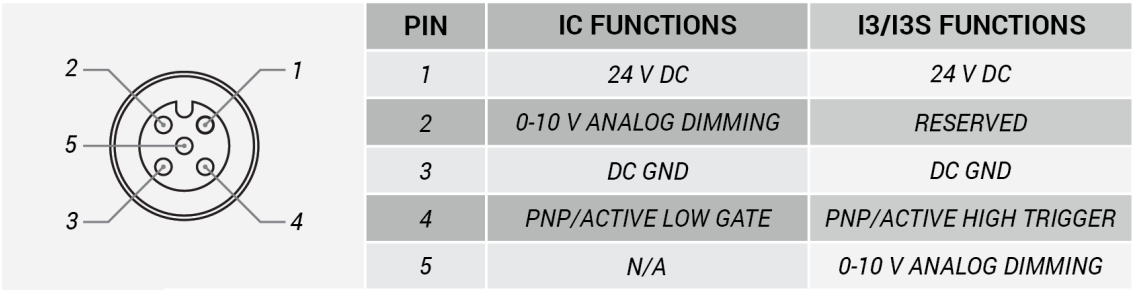
Standard Flying Lead Functions for IC, I3 and I3S Control Options



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

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

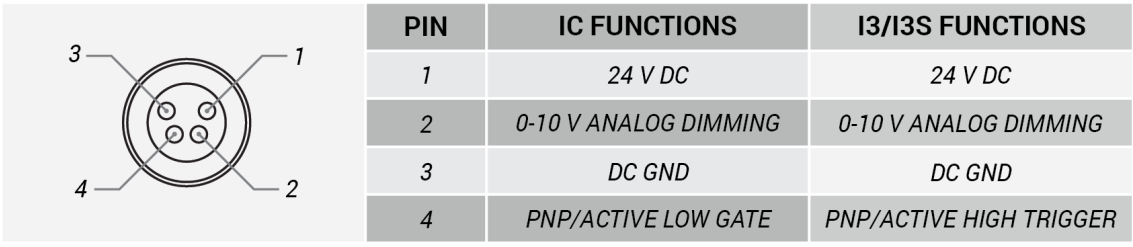
M12 Connector Pinout Functions for IC, I3 and I3S Control Options



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

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

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



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

*The functions listed above are only applicable when this product is configured with built-in 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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