

Product Highlights

- The FD2 Series provides a highly diffuse and high intensity source of illumination, primarily used for inspecting highly specular surfaces.
- FD2 Backlights are pre-engineered for scalability, allowing for size configurations in 1" increments from 3" to 46" in length and width.
- This Flat Diffuse Light series is offered in 5 wavelength options and can be configured with a polarization film.



General Specifications

	Color	24V Current	All Other Controls
Electrical Specifications	WHI	0.015A per sq. inch	0.0157A per sq. inch
	470, 530	0.015A per sq. inch	0.0086A per sq. inch
	625	0.015A per sq. inch	0.0055A per sq. inch
	850	0.015A per sq. inch	0.0079A per sq. inch
Normal Operating Temperature	0 - 60°C		
Weight	12" x 12" Unit - 2167g (76.44oz) (4.78lbs)		
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 Group 1 (Low-Risk) Applicable Wavelengths: 470, 530, 625, WHI		
Compliance	CE, RoHS, IEC 62471		
IP Rating	Not Rated		
Lumen Maintenance	L70 = 50,000 Hours		

Part Number Key

Model	Emitting Length (in)	Emitting Width (in)	Peak Wavelength	Connector/Control	Light Conditioning Option	-	Alternative Connector
FD2	XX	YY	XXX	XX	X	-	XXX
FD2	1" Increments from 1" to 46"	1" Increments from 1" to 46"	470 (blue)	C1	P (Polarizer) ^{2,3}		M12 ¹
			530 (green)	C5			M8 ¹
			625 (red-orange)	IC			
			880 (IR)	I3			
			WHI (white)	I3S			
				I4			
				24			

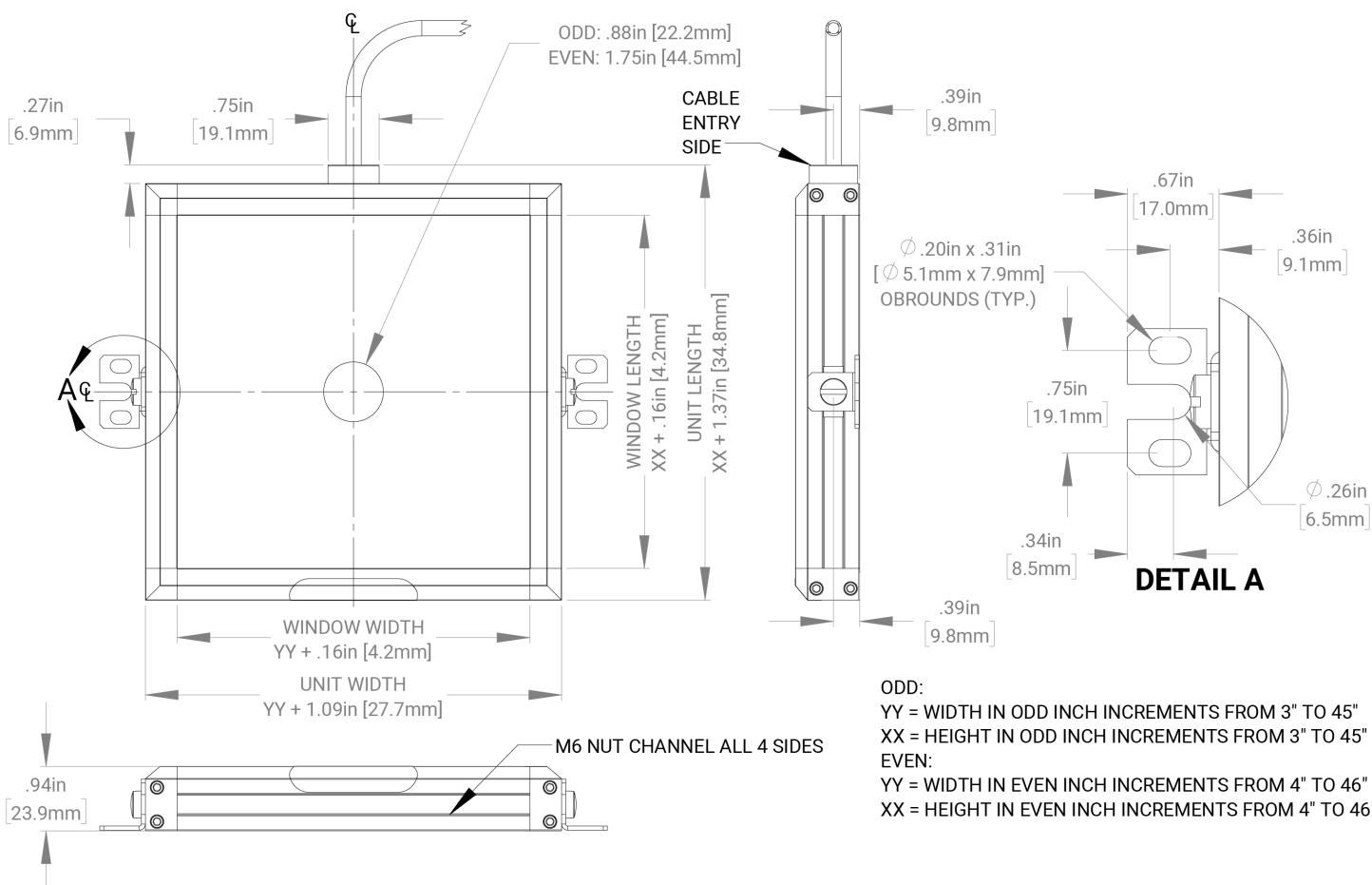
Example Part Numbers:

FD2-0313470C1P

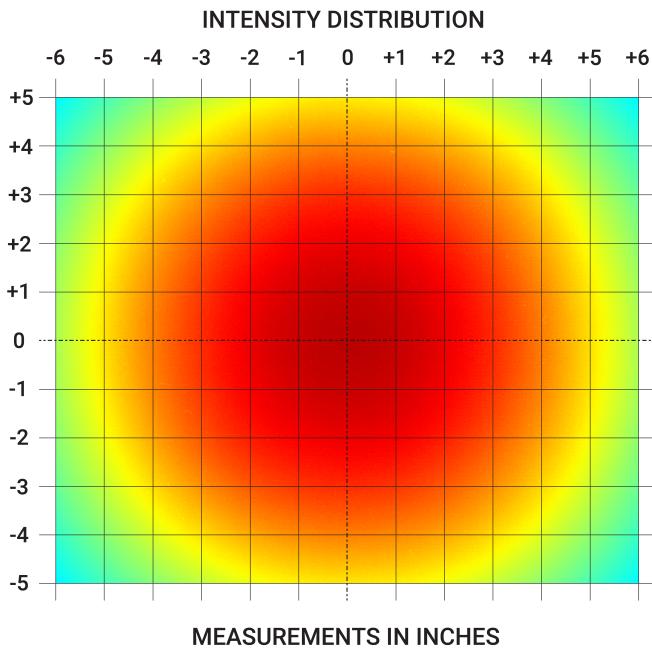
FD2-0624625IC-M12

¹Only available with IC, I3, I3S configurations²Only available up to 16" x 16"³470nm will reduce the life of the polarizer if selected

Mechanical Specs



Optical Specs



INTENSITY LEVELS

■	100% - 80%	34.5 klx - 27.6 klx	102.5 W/m ² - 82 W/m ²
■	80% - 60%	27.6 klx - 20.7 klx	82 W/m ² - 61.5 W/m ²
■	60% - 40%	20.7 klx - 13.8 klx	61.5 W/m ² - 41 W/m ²
■	40% - 20%	13.8 klx - 6.9 klx	41 W/m ² - 20.5 W/m ²
■	20% - 0%	6.9 klx - 0.0 klx	20.5 W/m ² - 0.0 W/m ²

OPTICAL MEASUREMENTS TAKEN AT A 200mm WORKING DISTANCE
USING A FD2-1212WHI24 CONFIGURATION

Electrical Specs

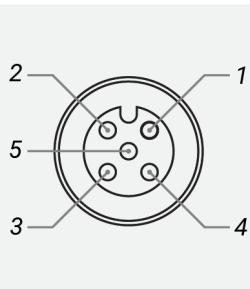
Standard Flying Lead Functions for 24V, IC, I3, I3S, and I4 Control Options



COLOR	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS	I4 FUNCTIONS
BROWN	24 V DC	24 V DC	24 V DC	24 V DC
WHITE	N/A	0-10 V ANALOG DIMMING	RESERVED	NPN/ACTIVE LOW TRIGGER
BLUE	DC GND	DC GND	DC GND	DC GND
BLACK	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER	PNP/ACTIVE HIGH TRIGGER
GRAY	N/A	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING

The functions listed above are applicable when this product is configured with built-in 24V, IC, I3, I3S, or I4 control, without the optional A-coded 5-position Male M12 or A-coded 4-position Male M8 connector.

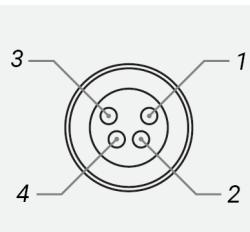
M12 Connector Pinout Functions for 24V, IC, I3, I3S, and I4 Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS	I4 FUNCTIONS
1	24 V DC	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	RESERVED	NPN/ACTIVE LOW TRIGGER
3	DC GND	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER	PNP/ACTIVE HIGH TRIGGER
5	N/A	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING

The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, I3S, or I4 control, with an A-coded 5-position Male M12 connector.

M8 Connector Pinout Functions for 24V, IC, I3, I3S, and I4 Control Options



PIN	24V FUNCTIONS	IC FUNCTIONS	I3/I3S FUNCTIONS	I4 FUNCTIONS
1	24 V DC	24 V DC	24 V DC	24 V DC
2	N/A	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING	0-10 V ANALOG DIMMING
3	DC GND	DC GND	DC GND	DC GND
4	N/A	PNP/ACTIVE LOW GATE	PNP/ACTIVE HIGH TRIGGER	PNP/ACTIVE HIGH TRIGGER

The functions listed above are only applicable when this product is configured with built-in 24V, IC, I3, I3S, or I4 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
For use with: DCS Series Controllers	For use with: Pulsar 320	In-line Continuous Controller	In-line Strobe/ Continuous Controller
Strobe/Continuous Controllers	High Power Strobe only Controller	Powered with: 24V Power Supply	Default On
			Powered with: 24V Power Supply
ICS 3S (I3S)	I4	24 VOLT	
In-line Strobe/ Continuous Controller	In-line Strobe/ Continuous Controller	Flying/Tinned Leads	
Default Off			
Powered with: 24V Power Supply	Powered with: 24V Power Supply	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

© 2021 Advanced illumination Inc. All rights reserved

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Advanced Illumination:](#)

[FD2-0404WHI24](#) [FD2-040462524](#) [FD2-0808625I3S](#) [FD2-0808WHI24](#) [FD2-0808470I3S](#) [FD2-080853024](#) [FD2-040447024](#) [FD2-040453024](#) [FD2-0404625I3S](#) [FD2-080885024](#) [FD2-0404850I3S](#) [FD2-080862524](#) [FD2-0404WHII3S](#) [FD2-0808WHII3S](#) [FD2-080847024](#) [FD2-0808850I3S](#) [FD2-040485024](#) [FD2-0808530I3S](#) [FD2-0404470I3S](#) [FD2-0404530I3S](#)