

Diffuse Light

**High
Homogeneity**

Long lifetime



effiFD

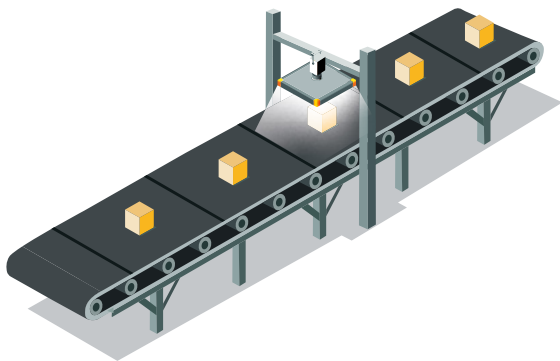
Flat Dome

INTRODUCTION

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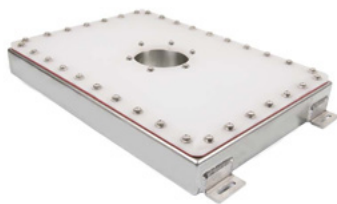
APPLICATIONS



RELATED PRODUCT

Refer to the datasheets of the products below for more details on those related products.

EFFI-FD-IP69K



IP69K version for
Food Industry & Washdown Environments

PART NUMBERING

STANDARD VERSION

EFFI-FD	- XXX	- YYY	- ZZZ	- VVVV
	Optical width (mm)	Optical length (mm)	Wavelength (nm)	Connector
	100	100	● 465 (Blue)	1M12
	150	150	● 525 (Green)	2M12
	200	200	● 625 (Red)	3M12
	...Every 50mm steps	...Every 50mm steps	● 850 (Infrared)	1M12P
	1500	1500	○ 000 (White 5700K)	2M12P

IMPORTANT NOTES:

- YYY must be larger than XXX in the part number.

AVAILABLE VERSIONS & OPTIONS

VERSION	
Power version S150 (3x output power)	EFFI-FD-XXX-YYY- 000 -VVVV (S150) Max duty cycle: 30% (mandatory) with max 1' time ON. Only available in white.
OPTICAL OPTIONS	
Polarizer (maximum size: 600-600)	EFFI-FD-XXX-YYY-ZZZ-VVVV- POL2 Eliminate glare from the workpiece making it easier to acquire a suitable image for the application with no hot spot. Efflux also proposes a polarizer kit accessory to install the polarizer directly on top of the product: EFFO-FD-POL2-XXX-YYY-KIT
MECHANICAL OPTION	
Thin edges	EFFI-FD-XXX T -YYY-ZZZ-VVVV or EFFI-FD-XXX-YYY T -ZZZ-VVVV This option decrease the thickness on the side indicated with T in the part-numbering. Advantages: Less bulky / Thickness / Dust accumulation prevented (smooth walls). For dimensions larger than 1m, contact Efflux.
Hole diameter	EFFI-FD-XXX-YYY-ZZZ- HH -VVVV HH corresponds to the hole diameter (D50, D58, D65). Default hole is 39mm large (D39).

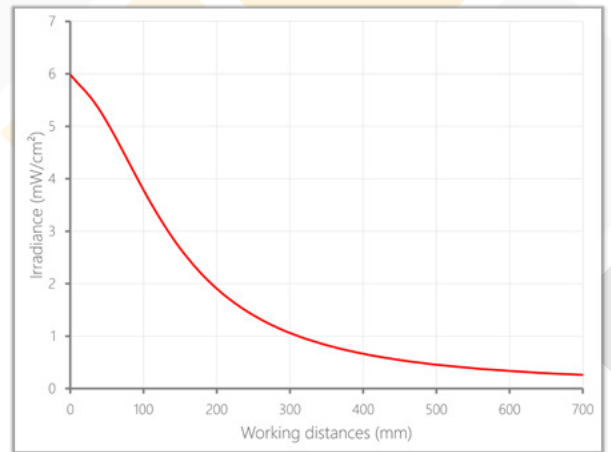
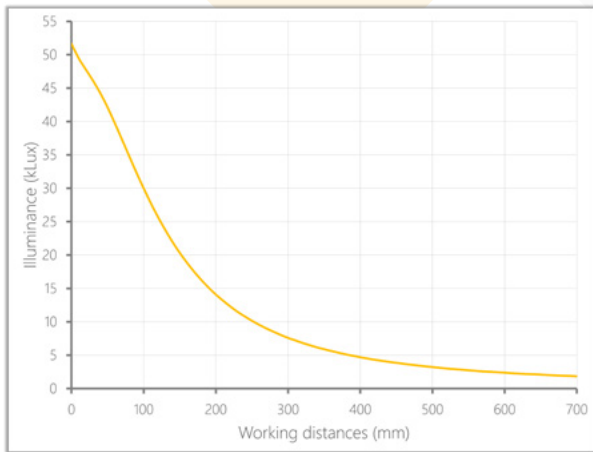
TECHNICAL SPECIFICATIONS



Illumination Mode	Continuous with AIC (Analog Intensity Control) or Strobe mode	
Wavelengths	465nm, 525nm, 625nm, 850nm, White (5700K ±700K)	
Power Supply	24V DC	
Connector(s)	M12 - 5 pins (x1, x2 or x3)	M12 Power - 4 pins (x1 or x2)
Power Consumption	Related to the dimensions	
Analog Intensity Control (AIC)	The output optical power is adjustable from 20% to 100% by applying a signal from [5V-24V DC] Total voltage range [0V-24VDC] / Don't exceed 24V DC / Signal consumption: see table below.	
Weight	Related to the dimensions	
Thickness	43.2mm (40mm with thin edge option)	
Dimensions	Any multiple of 50mm starting at 100x100mm	
Material	Device body: Aluminum alloy & ABS	
Fastener	Built-in M6 T-nut slot profile	
IP rating	IP5X	
Operation environment	Temperature: 0°C to 50°C - Humidity: 20 to 85%RH (with no condensation) - Altitude: Up to 2000m	
Storage environment	Temperature: -20° to 60°C - Humidity: 20 to 85%RH (with no condensation)	
Informations	Overvoltage category I - Protective class III - Pollution degree 3	
Regulations & Marking	CE - UKCA	
Environmental Standards	RoHS Directives (2011/65/EU, 2015/863/EU and China RoHS) - REACH Regulation - WEEE Regulation	
Country of Origin	France	

OPTICAL SPECIFICATIONS

OUTPUT POWER



— White 5500K — Red 625nm & IR850

The clear aperture is not represented on this graph as it can be neglected after a few mm, contact us for more information.

POLARIZER

Using polarizer, on the Efflux light and on the camera, it is possible to eliminate glare from your workpiece making it easier to acquire a suitable image for the application.



EFFI-FD: no reflection



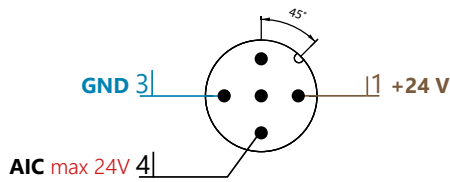
Bar light and neon light reflection

ELECTRONICAL SPECIFICATIONS

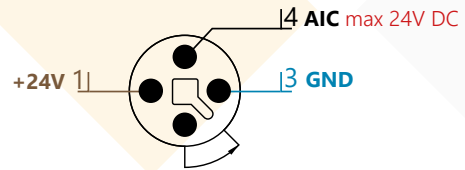
CONTACT ARRANGEMENT

The EFFI-FD is supplied with 24V DC. Depending on the size, the EFFI-FD come with different types and numbers of connectors.

M12 5pins - 1 input



M12P 4pins - male connector



Important notes:

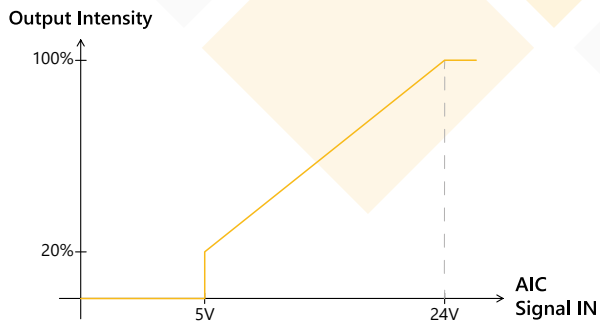
- The AIC pin needs to be connected.
- In the case of multiple connectors, the AIC (DIM) contact is in the first connector, the one closer to the edge (the AIC contact on the other connectors is not assigned).
- (*) For the power version this pin is used for the strobe.

POWER CONSUMPTION & CONNECTOR DEFINITION

		Optical length (mm)																				
		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1500
Optical width (mm)	50			10	10	10	15	15	15	20	20	20	25	25	25	30	30	30	35	35	35	55
	100		10	15	15	20	25	25	30	35	35	40	45	45	50	55	55	60	65	65	70	105
	150			20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	155
	200				30	35	45	50	55	65	70	80	85	90	100	105	110	120	125	130	140	210
	250					45	55	60	70	80	90	95	105	115	120	130	140	150	155	165	175	260
	300						65	75	85	95	105	115	125	135	145	155	165	175	185	195	210	310
	350							85	100	110	120	135	145	160	170	180	195	205	220	230	240	360
	400								110	125	140	155	165	180	195	210	220	235	250	260	275	415
	450									140	155	170	185	205	220	235	250	265	280	295	310	465
	500										175	190	210	225	240	260	275	295	310	325	345	515
	550											210	230	245	265	285	305	320	340	360	380	565
	600												250	270	290	310	330	350	370	390	415	620
	650													290	315	335	360	380	405	425	445	670
	700														340	360	385	410	435	455	480	720
	750															385	415	440	465	490	515	770
800																440	470	495	520	550	825	
850																	495	525	555	585	875	
900																		555	585	620	925	
950																			620	650	975	
1000																				685	1030	
1500																					1540	

Electrical Power	Corresponding color	Amount & type of connectors
≤ 70W	Light Blue	1X M12
75W - 145W	Light Green	2X M12 or 1X M12 Power
150W - 270W	Light Orange	3X M12 or 1X M12 Power
275W - 560W	Light Red	2X M12 Power
> 560W		Specific configuration - contact EFFILUX for more information

AIC: ANALOG INTENSITY CONTROL



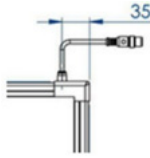
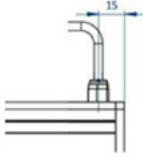


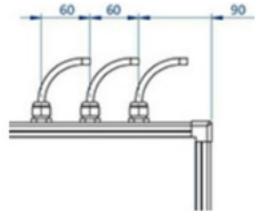
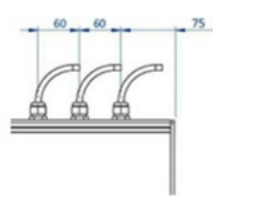
The output optical power of the EFFI-FD is adjustable from 20% to 100% by applying a signal from 0V to 24V on the AIC pin. The control range can be changed to 0-10V or 0-5V on request.

AIC Signal consumption (mA)

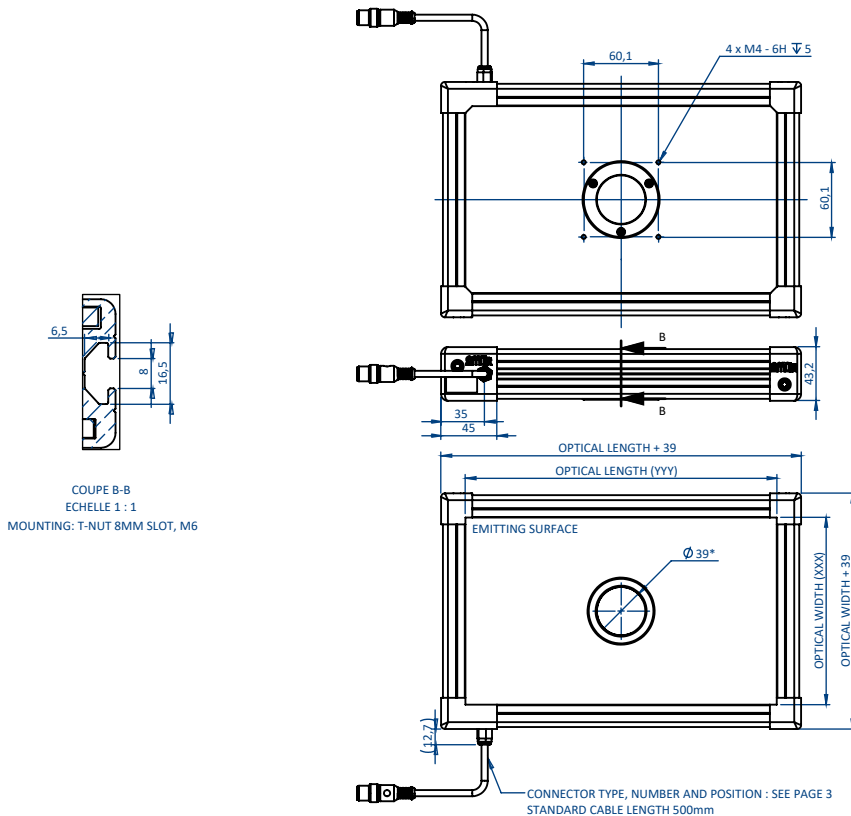
		Optical length (mm)							
		50	100	200	300	400	500	1000	1500
Optical width (mm)	50	0.3	0.6	1.2	1.8	2.4	3	6	9
	100		0.3	0.6	0.9	1.2	1.5	3	4.5
	150			1.8	2.7	3.6	4.5	9	13.5
	200			1.2	1.8	2.4	3	6	9
	250				3.6	4.8	6	12	18
	300				2.7	3.6	4.5	9	13.5
	500						7.5	15	22.5

MECHANICAL SPECIFICATIONS

CONNECTORS POSITIONS

Number of connectors	Connector type	Connector position(s)	
		EFFI-FD Standard: On the longest side	EFFI-FD Thin Edges: On the longest side with standard edges
1	M12 Standard	35mm from the edge of the product 	15mm from the edge of the product 
	M12 Power	90mm from the edge of the product 	75 mm from the edge of the product 
Many	M12 Standard or M12 Power	First 90mm connector Space between 2 cable glands: 60mm 	First 75mm connector Space between 2 cable glands: 60mm 

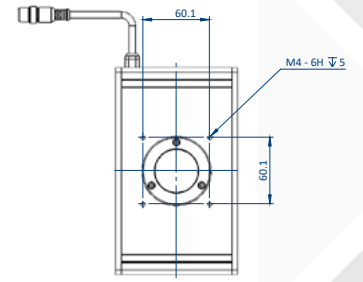
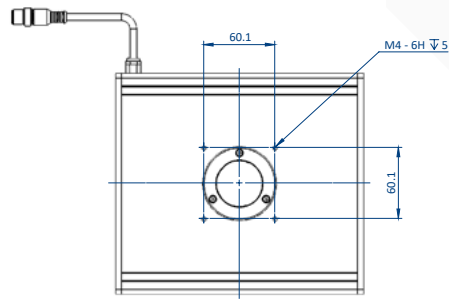
STANDARD VERSION



THIN EDGES VERSION

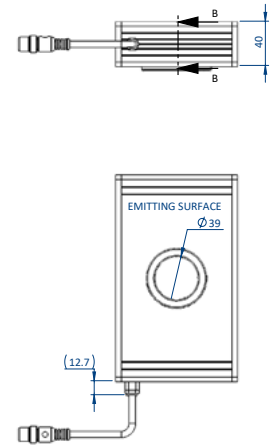
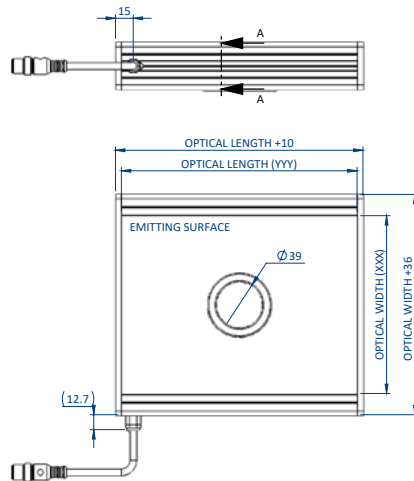
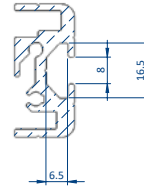
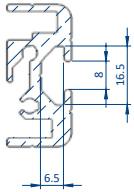
EFFI-FD-XXXT-YYY-ZZZ-HH-VVVV

EFFI-FD-XXX-YYYT-ZZZ-HH-VVVV



COUPE A-A
ECHELLE 1 : 1
MOUNTING: T-NUT 8MM SLOT m6

COUPE B-B
ECHELLE 1 : 1
MOUNTING: T-NUT 8MM SLOT M6



ACCESSORIES

Please refer to the specific documentation for additional information on the accessories of the EFFI-FD



Extension cables

M12

2meters: EFFC-CAB-M12-FM-5-DD-L2
 5meters: EFFC-CAB-M12-FM-5-DD-L5
 10meters: EFFC-CAB-M12-FM-5-DD-L10

M12P

2meters: EFFC-CAB-M12P-FM-4-DD-L2
 5meters: EFFC-CAB-M12P-FM-4-DD-L5
 10meters: EFFC-CAB-M12P-FM-4-DD-L10

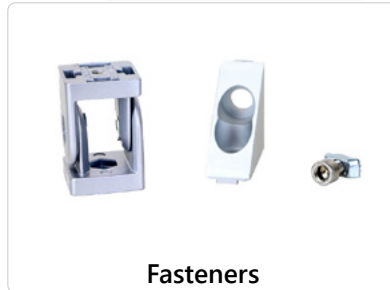


Black collar

EFFM-FD-COL-BLACK

With camera polarizer

EFFO-FD-POL-KIT-M40.5



Fasteners

T-Nut Kit M6: EFFV-BOLT-0011
 Pivot joint not drilled: EFFM-1-0002
 Bracket: EFFM-1-0017/19/21



Camera mounting

EFFM-1-HORI-STEEL-V2
 EFFM-1-VERT-STEEL-V2



Potentiometer

EFFI-DIMMER
 EFFI-DIMMER2

Note: The black collar is used in polarized configuration to hold the polarizer on the camera side.

CONTACT INFORMATION

Please refer to the specific documentation (datasheet, user manual and drawing) for complementary information. Contents of this document are based on information available as of February-2025 and may be changed without prior notice.



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