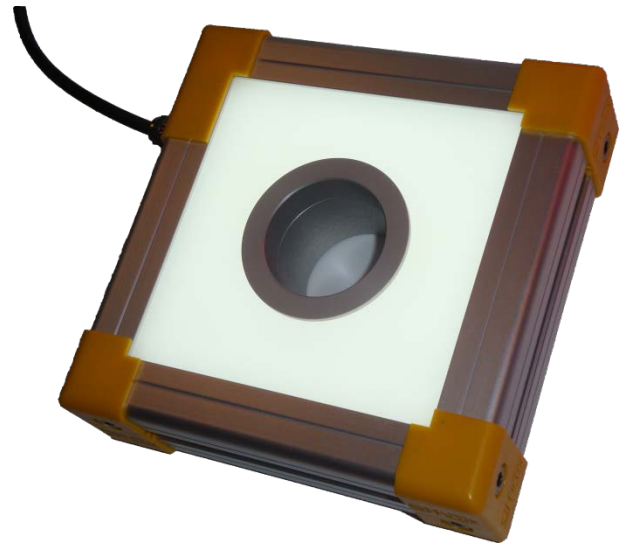


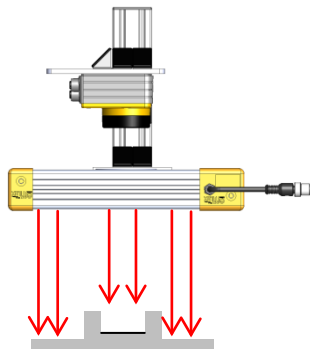
HOMOGENOUS AND POWERFUL FLAT DOME

EFFI-FD

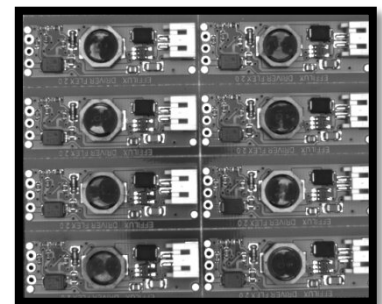


- **Intense illumination**
- **Diffuse light**
- **High Homogeneity**
- **Standard connections and fasteners**
- Available from **100*100 mm²** to **1000*1500 mm²**
- **Long lifetime** and few maintenance

APPLICATIONS:



Light used : EFFI-FD_300_300_000



Benefits: Reproduce the effects of a dome illumination in a compact design

Alternative to a ring light

High output, uniform diffused light

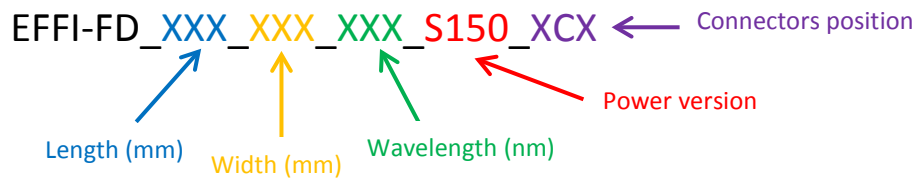
Inspections: Reflective item, plastic, metal, glass

OVERVIEW OF THE CHARACTERISTICS

Electronics	<i>Power supply</i>	24V DC
	<i>Illumination mode</i>	Continuous with a DIM process [0,24V]
	<i>Connectors</i>	M12 4 pins
	<i>Power consumption</i>	Related to the dimensions
	<i>Cable length</i>	500mm from the side to the connector
Optics	<i>Wavelength</i>	Various wavelengths (blue, red, green, IR and white)
	<i>Output window</i>	Opalin to homogenize the light repartition
Mechanics	<i>Thickness</i>	43.2mm
	<i>Dimensions</i>	Any multiple of 50mm
	<i>Fastener</i>	A groove all around the device
	<i>Material</i>	Base and side panels : Aluminum alloy ; Diffusion plate : acrylic
Environment	<i>Working temperature</i>	0°C to 50°C (no condensation)
	<i>IP code</i>	IP54

TECHNICAL CHARACTERISTICS

How to create the EFFI-FD?



Available wavelengths:

- White – reference **000**
- Blue – reference **460**
- Green – reference **525**
- Red – reference **625**
- Infrared – reference **850**

Other wavelengths are available upon request

Power version

- **150**mA configuration → Strobed mode. Only for white (000)

NB: Standard configuration is at 50mA

Other configurations are available upon request

Connectors position

- **XCA**: connectors on the same side (config. A)
- **XCB**: connectors on opposite side (config. B)

NB: Details on those two configurations are addressed in the following section

Additional configurations:

- Position of a single connector

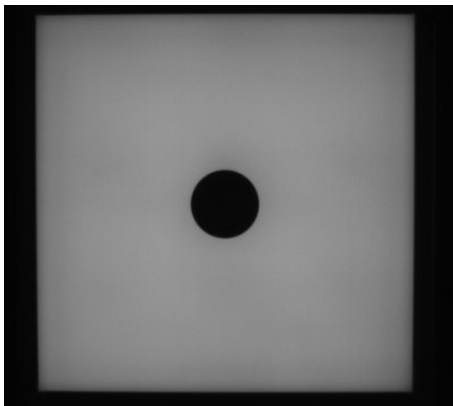
The backlight is designed to present a connector on the longer side of the device. Nevertheless, it can be modified and be placed on the smallest side. **In this configuration, a C is added at the end of the device name.**

- Reduction of the size of the edge of the device

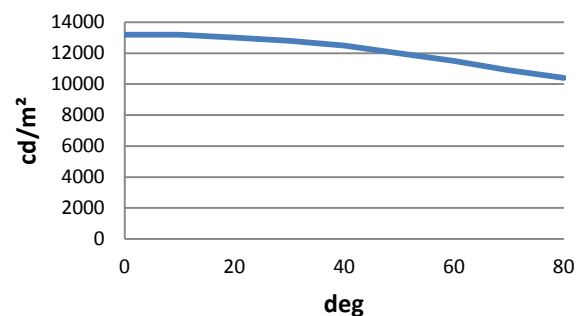
Add a 'T' in the reference after the dimension that needs to be reduced.

Optical characteristics

High luminosity and high uniformity



Variation of the luminance vs angle
(in white)



Diffused, even illumination of standard dome lights

Direct illumination ❌



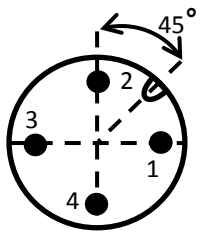
EFFI-FD illumination ✅



Electrical characteristics

Electrical connections of the backlight

The backlight is connected to the power supply using a 4 pins connector.



Pin number	Cable color	Designation
1	Brown	+24V
2	White	n.a.
3	Blue	GND
4	Black	DIM – max 24V

**Make sure that you never exceed the maximum voltage.
The device is supplied with a 24V (±5%) constant voltage source.**



Depending on the size of the device, different configurations are considered.

White device – 50mA		Optical length (mm)										
		100	150	200	250	300	400	500	600	800	1000	1500
Optical width (mm)	100	7	11	14	18	21	28	35	42	56	70	105
	150	11	16	21	26	32	42	53	63	84	105	158
	200	14	21	28	35	42	56	70	84	112	140	210
	250	18	26	35	44	53	70	88	105	140	175	263
	300	21	32	42	53	63	84	105	126	168	210	315
	350	25	37	49	61	74	98	123	147	196	245	368
	400	28	42	56	70	84	112	140	168	224	280	420
	450	32	47	63	79	95	126	158	189	252	315	473
	500	35	53	70	88	105	140	175	210	280	350	525
	600	42	63	84	105	126	168	210	252	336	420	630
800	58	84	112	140	168	224	280	336	448	560	840	
1000	70	105	140	175	210	280	350	420	560	700	1050	

Power	Amount of connectors
6 W to 80W	1
85W to 170W	2
170W to 270W	3
280W to 370W	4
More than 370W	Specific configuration

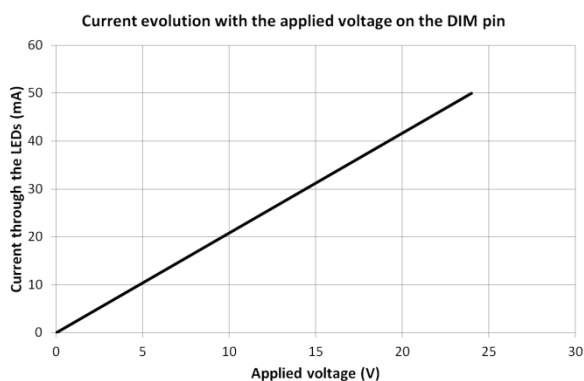
Remark: For devices operating at 150mA, the amount of connectors will have to be discussed.

Electrical behavior of the device

The DIM pin has to be used: if not, the device is OFF.

Apply a constant voltage, *lying between 0V and 24V*, on this pin.

When a 24V voltage is applied, the device is at full power; if a 0V voltage is applied, the device is completely off.

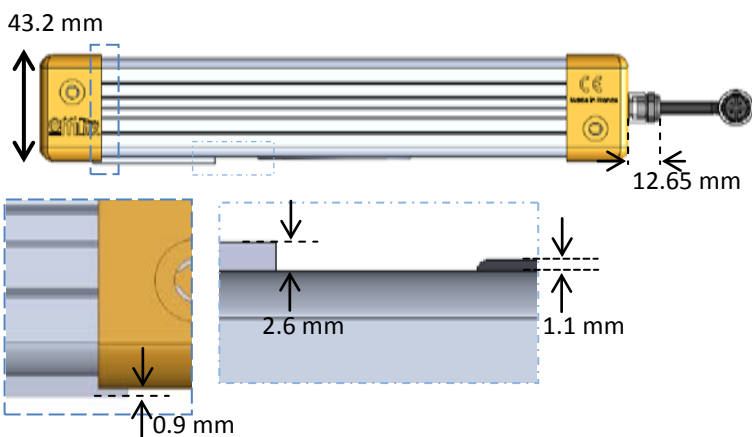
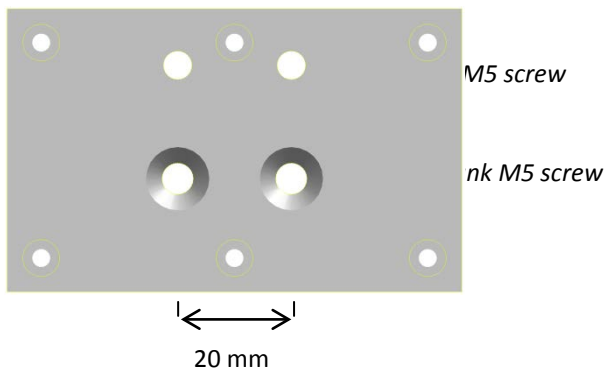
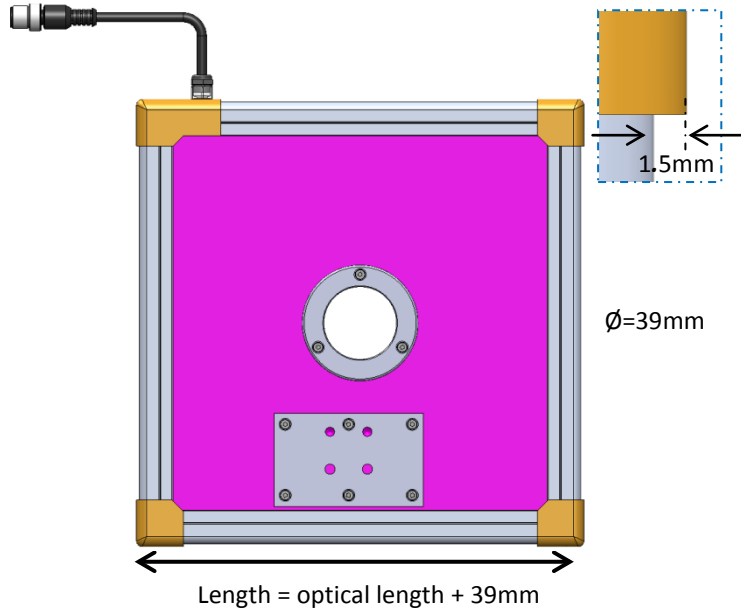


**Make sure that you never exceed the maximum voltage.
The device is supplied with a 24V (±5%) constant voltage source.**

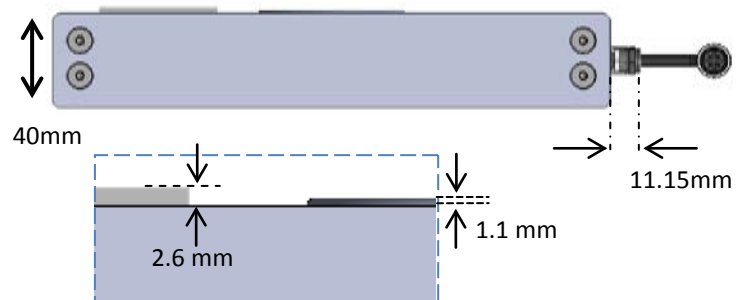
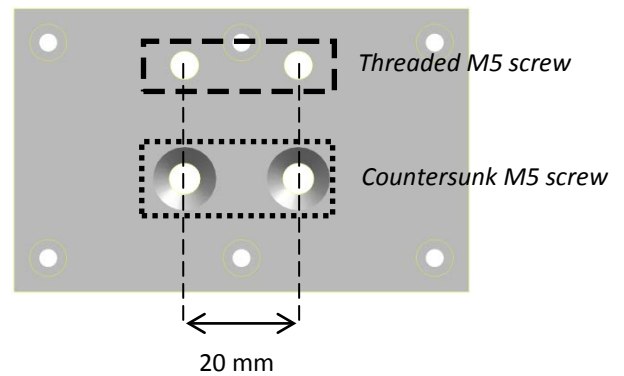
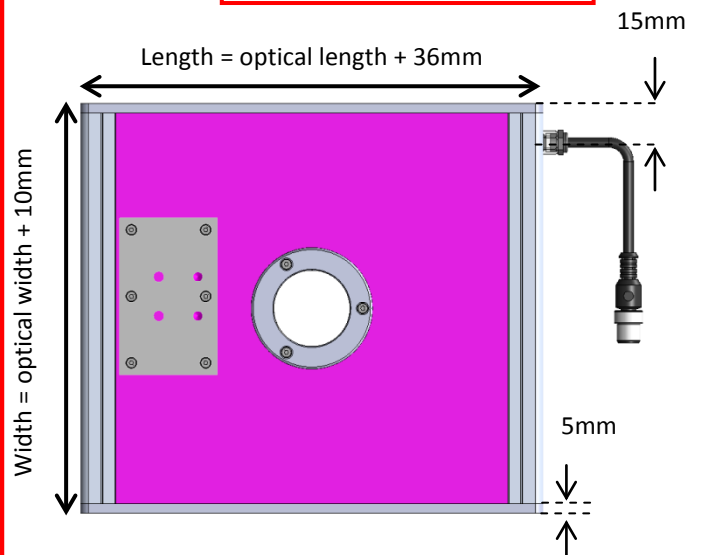
Mechanical considerations

Mechanical configurations

Standard configuration



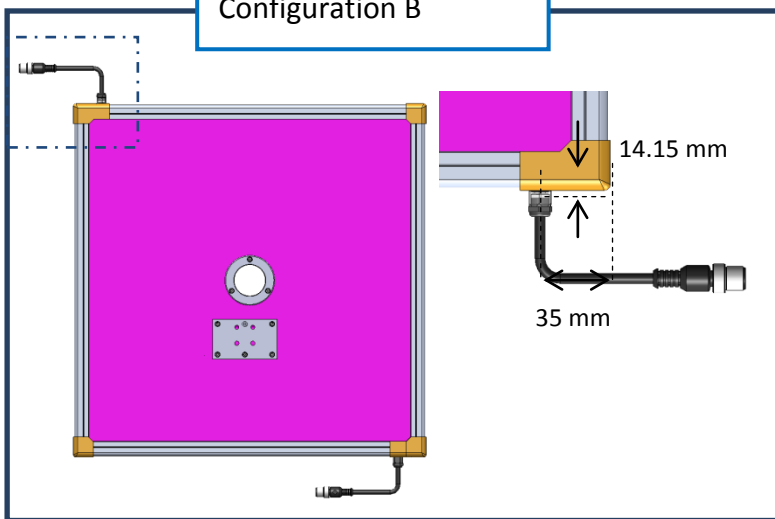
Thin edge configuration



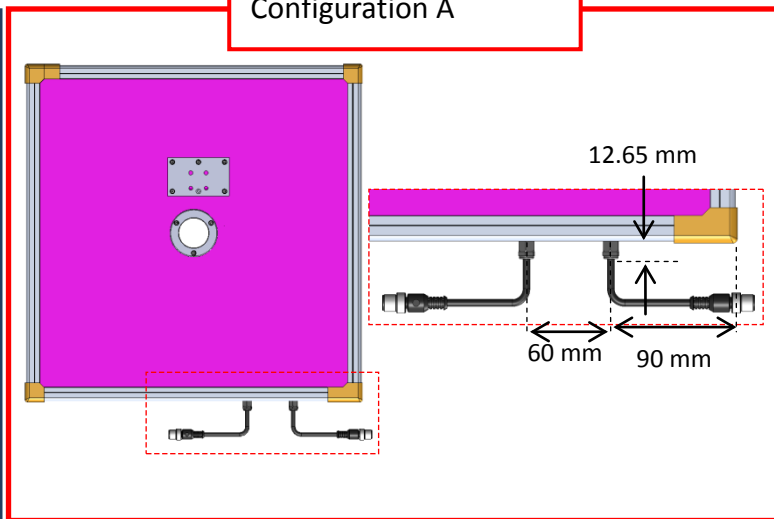
Remark: The connector is on the thick side of the device

Electrical configurations

Configuration B

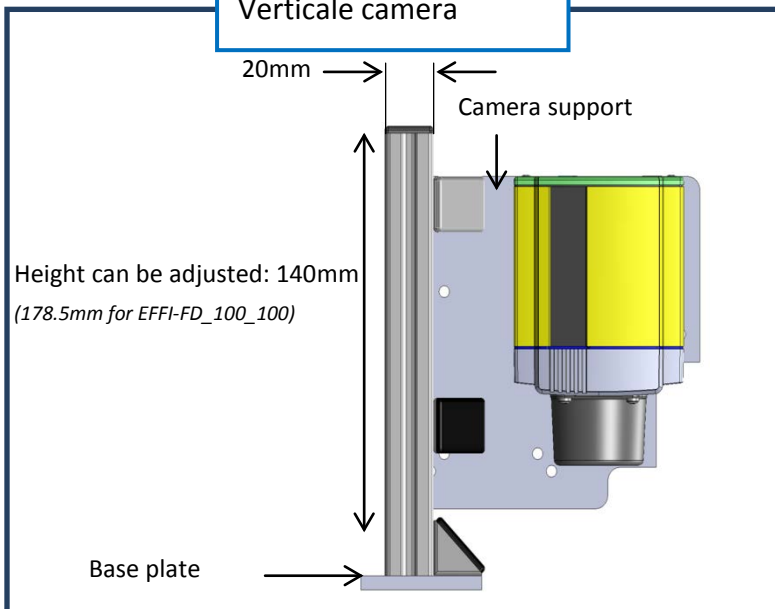


Configuration A

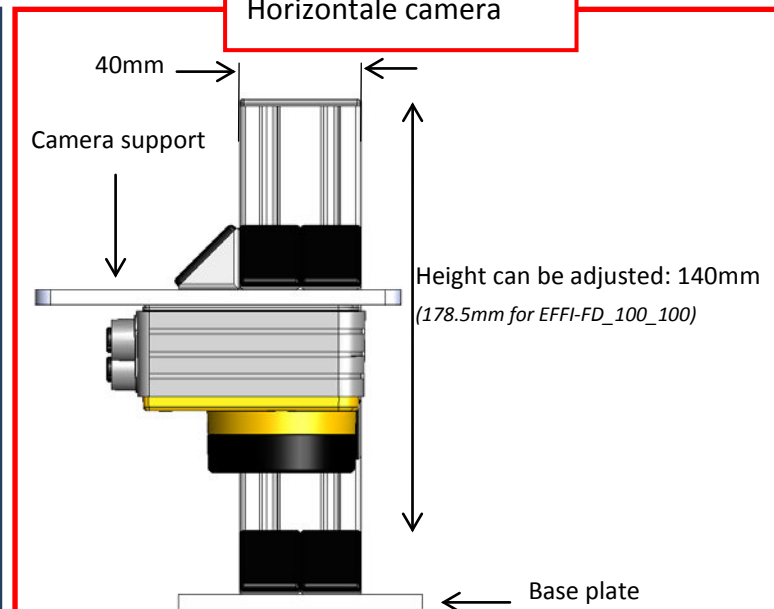


Description of the accessory

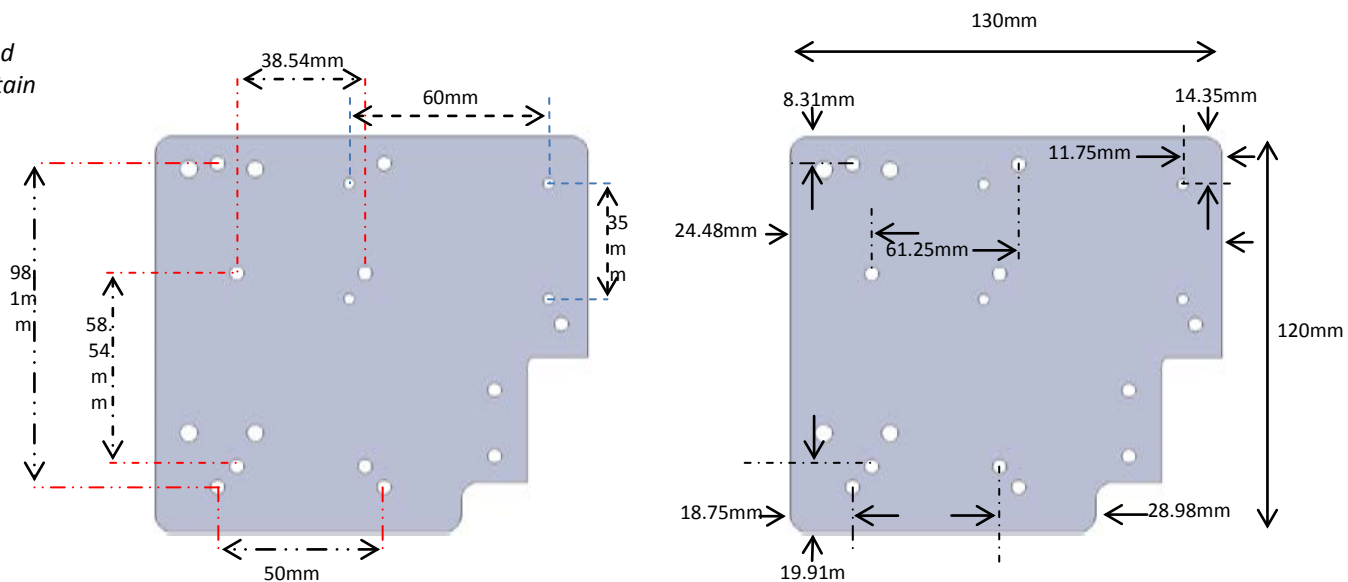
Verticale camera



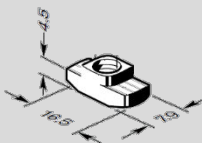
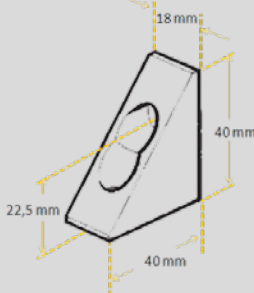
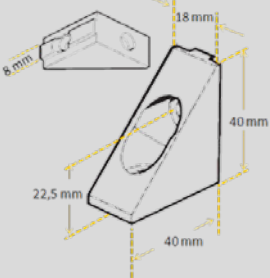
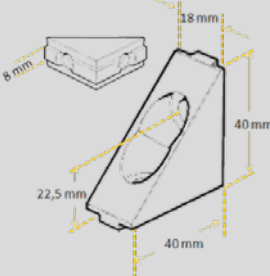
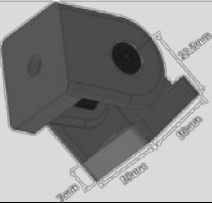
Horizontale camera



Holes positions and dimensions to maintain the camera



ACCESSORIES

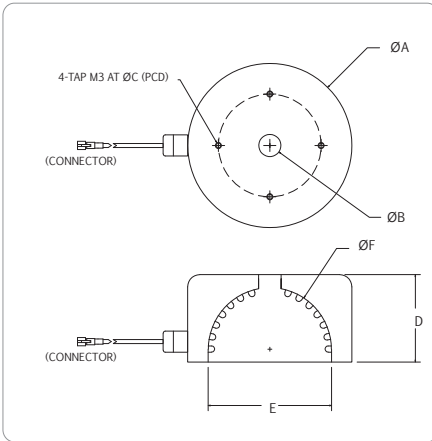
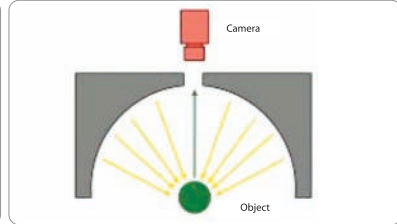
	EFFILUX reference	Description
Mechanics	EFFV-Bolt_0011	 <p>T-nut to insert in the slot – For M6 screw</p>
	EFFM_1_0017	 <p>Bracket to fasten the EFFI-BL (no ridge) <i>Delivered with 2 EFFV-Bolt_0011, 2 screws and 2 flat washers</i></p>
	EFFM_1_0019	 <p>Bracket to fasten the EFFI-BL (1 ridge) <i>Delivered with 2 EFFV-Bolt_0011, 2 screws and 2 flat washers</i></p>
	EFFM_1_0021	 <p>Bracket to fasten the EFFI-BL (2 ridges) <i>Delivered with 2 EFFV-Bolt_0011, 2 screws and 2 flat washers</i></p>
	EFFM_1_0002	 <p>Fastener used to simplify the projector integration (orientation) <i>Delivered with EFFV-Bolt_0011 and 2 M6x14 screws</i></p>
	EFFI-FD-camera	Accessory to be mounted on the EFFI-FD to facilitate camera attachment. Compatible with most of machine vision cameras.
Electronics	EFFC-Cable_M12_0002 Binder : 79 343 13 04	M12 cable – 4 pins – 2m long
	EFFC-Cable_M12_0003 Binder : 79 3430 17 04	M12 cable – 4 pins – 5m long
	EFFC-Cable_M12_0004 Binder : 79 3430 30 04	M12 cable – 4 pins – 10m long
	EFFC-Cable_M12_0025 Phoenix : 1456938	M12 cable – 4 pins – High Flex- 1500mm long
	EFFC-Cable_M12_0026 Phoenix : 1456941	M12 cable – 4 pins – High Flex- 3000mm long

Direct Illumination

IDD SERIES - Direct Dome light illumination

LED is mounted inside a dome, strong irradiation can be made at whole angles and extreme bright light.

Application: SMD LED inspection, SMD resistor, Crack and chip.



Technical Specification:

- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

Customize Lighting:

- Customize Sizes, Mounting requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

Model	Dimensions (MM)						Color	Voltage / Watt	Current
	ØA	ØB	ØC	D	E	ØF			
IDD-00-045-4-X	55	12	40	23.5	40	40	● ● ● ●	24V / 2.88W	120mA
IDD-00-075-7-X	80	11	50	42.5	60	60	● ● ● ● ● ● ● ●	24V / 3.60W	150mA
							● ● ● ● ● ● ● ●	24V / 7.92W	330mA
							● ● ● ● ● ● ● ●	24V / 10.08W	420mA

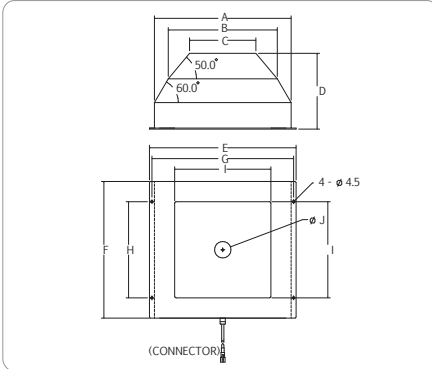
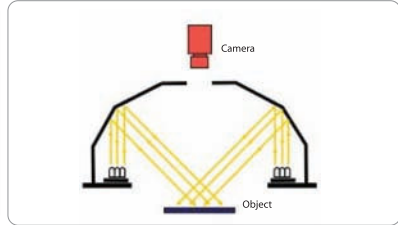
Remark: 2 types of white are available- W: Cool White WW: Yellowish White

Indirect Illumination

IDQ SERIES - Indirect square illumination

IDQ series provide even and diffuses illumination over a square area. The illumination is able to provide excellent illumination for square or rectangular objects.

Application: crack, chip, stains and mark on edge of square or rectangular object.



Technical Specification:

- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

Customize Lighting:

- Customize Sizes, Mounting requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

Model	Dimensions (MM)										Color	Voltage / Watt	Current
	A	B	C	D	E	F	G	H	I	ØJ			
IDQ-00-100-1-X	180	144.2	85.5	102	200	180	190	100	100	35	● ● ○ ● ● ○	24V / 19.2W 24V / 19.2W	800mA 800mA
IDQ-00-190-1-X	270	216	131	150	290	270	280	190	190	35	● ● ○ ● ● ○	24V / 38.4W 24V / 38.4W	1600mA 1600mA
IDQ-00-300-1-X	412	370.5	193	132	452	412	432	200	318	50	● ● ○ ● ● ○	24V / 57.6W 24V / 57.6W	2400mA 2400mA

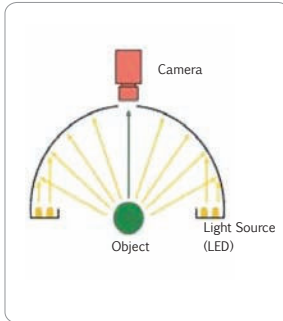
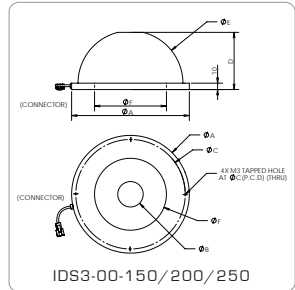
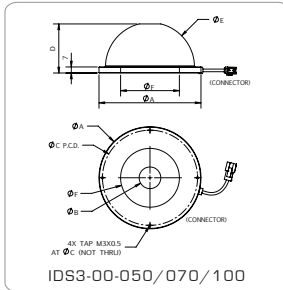
Indirect Illumination



IDS3 SERIES - Even illumination for all angles

IDS3 series shine from a conical surface providing illumination from all angles. The illumination is able to provide images without shadows.

Application: crack, chip, stains on circular or cylindrical objects, solder inspection and substrate inspection.



Technical Specification:

- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

Customize Lighting:

- Customize Sizes, Mounting requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

Model	Dimensions (MM)						Color	Voltage / Watt	Current
	ØA	ØB	ØC	D	ØE	ØF			
IDS3-00-050-1-X	68	10	60	33.8	53	25	<ul style="list-style-type: none"> ● 24V / 1.08W 45mA ● ○ 24V / 1.44W 60mA 		
IDS3-00-070-2-X	95	20	85	44.5	78	41	<ul style="list-style-type: none"> ● 24V / 3.24W 135mA ● ○ 24V / 3.96W 165mA 		
IDS3-00-100-2-X	118	25	110	56.8	103	68	<ul style="list-style-type: none"> ● 24V / 4.32W 180mA ● ○ 24V / 5.76W 240mA 		

Model	Dimensions (MM)						Color	Voltage / Watt	Current
	ØA	B	ØC	D	ØE	ØF			
IDS3-00-150-2-X	185	40	172	89.8	165	113	<ul style="list-style-type: none"> ● 24V / 6.48W 270mA ● ○ 24V / 7.92W 330mA 		
IDS3-00-200-2-X	232	50	222	112.8	212	160	<ul style="list-style-type: none"> ● 24V / 9.36W 390mA ● ○ 24V / 12.24W 510mA 		
IDS3-00-250-2-X	284	50	272	139.4	261.6	212	<ul style="list-style-type: none"> ● 24V / 11.52W 480mA ● ○ 24V / 15.12W 630mA 		

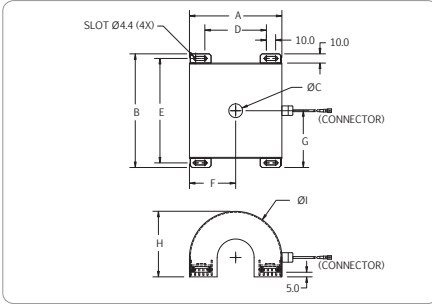
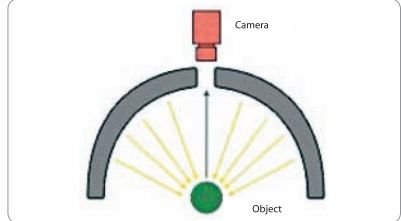
Remarks : 1. 2 types of white are available- W: Cool White WW: Yellowish White
 2. IDS2 part numbers are changed to IDS3
 3. IDS3 is an optimization design of IDS2

Indirect Illumination

IDT SERIES - Tunnel illumination

IDT series shines from a cylindrical surface to provide a tunnel illumination. The illumination is able to provide even illumination for long cylindrical surface.

Application: Crack, chip, stains and mark on cylindrical surface or shafts.



Technical Specification:

- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

Customize Lighting:

- Customize Sizes, Mounting requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

Model	Dimensions (MM)								Color	Voltage / Watt	Current	
	A	B	øC	D	E	F	G	H				øI
IDT-00-100-1-X	100	123	15	66.6	113	50	61.5	71	100	●●○	24V / 12W	500mA
IDT-00-150-1-X	150	183	25	116.6	173	75	91.5	96	150	●●○	24V / 24W	1000mA
IDT-00-200-1-X	200	183	25	166.6	173	100	91.5	121	200	●●○	24V / 24W	1000mA