

Uniform

Built-in driver

**Ajustable
beam angle**

Compatible



effiRING

Adjustable Beam Power Ring Light

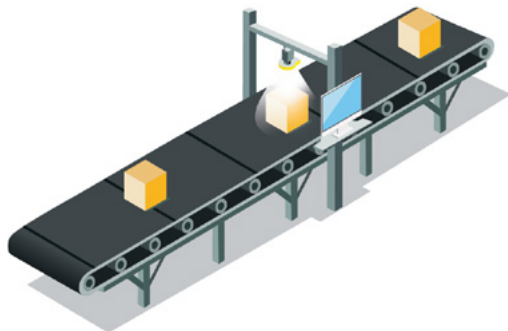
INTRODUCTION

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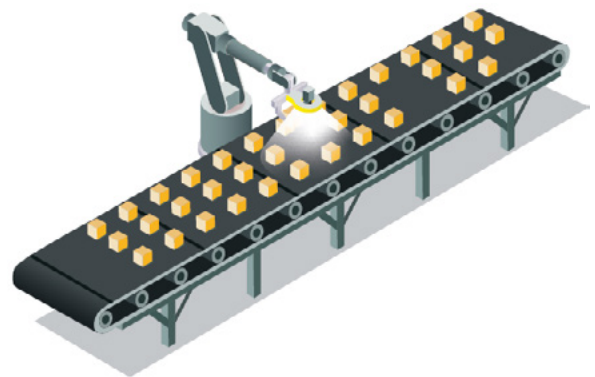
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APPLICATIONS

Quality control



Pick and Place



RELATED PRODUCT

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

EFFI-SRING



Compact & flexible
segmented ring light

PART NUMBERING

STANDARD VERSION

EFFI-RING	- ZZZ	- WW	- PP
	Wavelength [nm]	Windows	Lens position/ Emitting angle
●	365* (UV)	TR: Transparent	P0
●	405 (UV)	SD: Semi-Diffuse	P1
●	465 (Blue)	OP: Opaline	P2
●	525 (Green)		P3
●	625 (Red)		
●	850 (Infrared)		
○	000 (White 5500K)		
●	SWIR*		

Notes:

- (*) Short Wave InfraRed available, refer to the corresponding annex
- For the UV wavelength 365: no lens (not compatible) and a PMMA glass treated for UV.

AVAILABLE OPTIONS & VERSIONS

STR option

EFFI-RING - ZZZ - WW - PP - STR

- The direct current option gives a full control over the current sent in the LEDs. It allows strobing and more light power.
- Warning: There is no LED protection

Polarizer option

EFFI-RING - ZZZ - WW - PP - POL

- The optical accessory Polarizer eliminates glare caused by the lighting on parts to control.

Multispectral configuration

EFFI-RING - ZZZ - WW - PP - RGB or WUI

- With the EFFI-RING light, the 3-way potentiometer accessory will only allow to switch ON/OFF each color independently, not to adjust the intensity.

GENERAL SPECIFICATIONS



Illumination Mode	Continuous or strobe	
Wavelengths	365nm, 405nm, 465nm, 525nm, 625nm, 850nm, White (5500K ±500K), SWIR	
Power Supply	24V DC	Direct current
Connector(s)	M12 - 5 pins	M8 - 4 pins
Power Consumption	72W	Depends on your configuration
Weight	400 g	
Dimensions	117mm x 151mm x 40mm	
Clear aperture	58 mm	
Material	Device body: Aluminum alloy & ABS	
Fastener	M4 screws	
IP rating	IP65 (except with polarizer accessory: IP50) For extended use with water, use a plastic cap on the unused connector (M8 or M12)	
Operation environment	Temperature: 0°C to 40°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

LENS POSITION

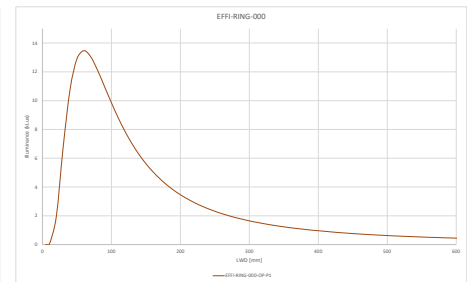
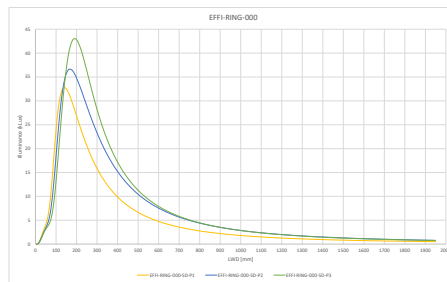
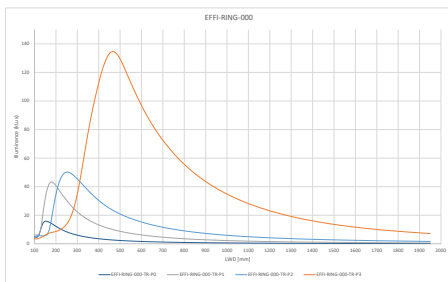


Illumination vs working distance :

Transparent

Semi-diffuse

Opaline

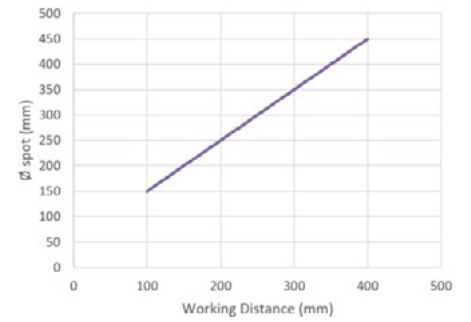
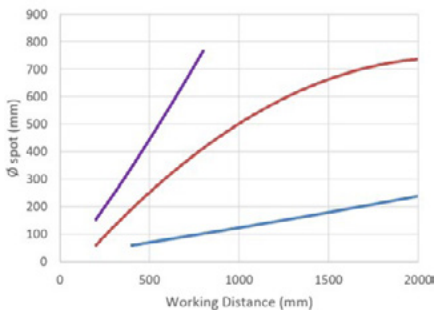


Ø Spot vs working distance :

Transparent

Semi-diffuse

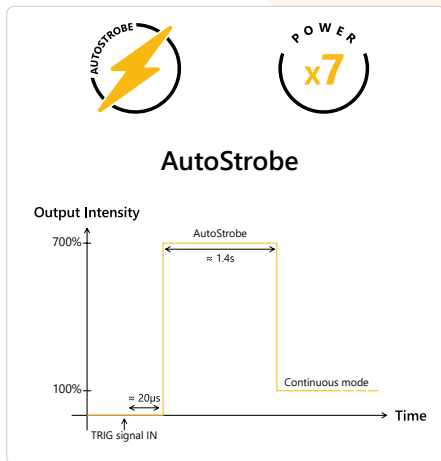
Opaline



Legend: P0 (blue), P1 (red), P2 (green), P3 (purple)

ELECTRONICAL SPECIFICATIONS

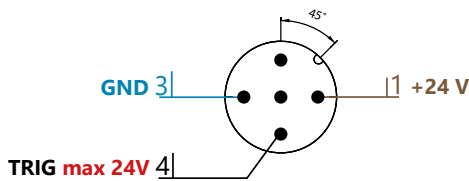
WORKING MODE



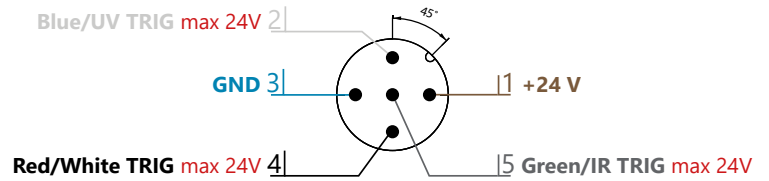
WIRING LAYOUT

Standard configuration

M12 5pins - (Monochrome version)

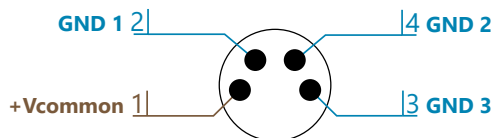


M12 - 5pins (RGB/ WUI)

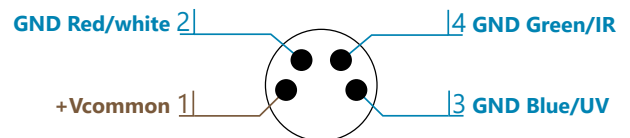


M8 male connector - direct LED control (expert mode)

M8 - male connector (Monochrome version)



M8 - male connector (RGB/WUI)

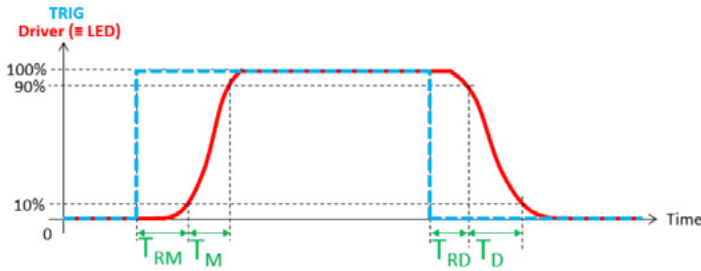


M8 STR CONFIGURATION

Do not exceed the maximum current for a given frequency and a given T_{pulse} indicated in the table below.

T pulse (μs)	F (Hz)				
	1	5	10	15	20
100 000	1.0 A				
50 000	1.2 A				
10 000	1.5 A		1.0 A		
1 000				2.0 A	
100	2.0 A				

CHARACTERISTICS OF THE PULSE



Designation	Time (μs)
Response rise time (T_{RM}) ¹	10*
Rise time (T_M) ²	10
Response fall time (T_{RD}) ⁴	5*
Fall Time (T_D) ³	10

Notes:

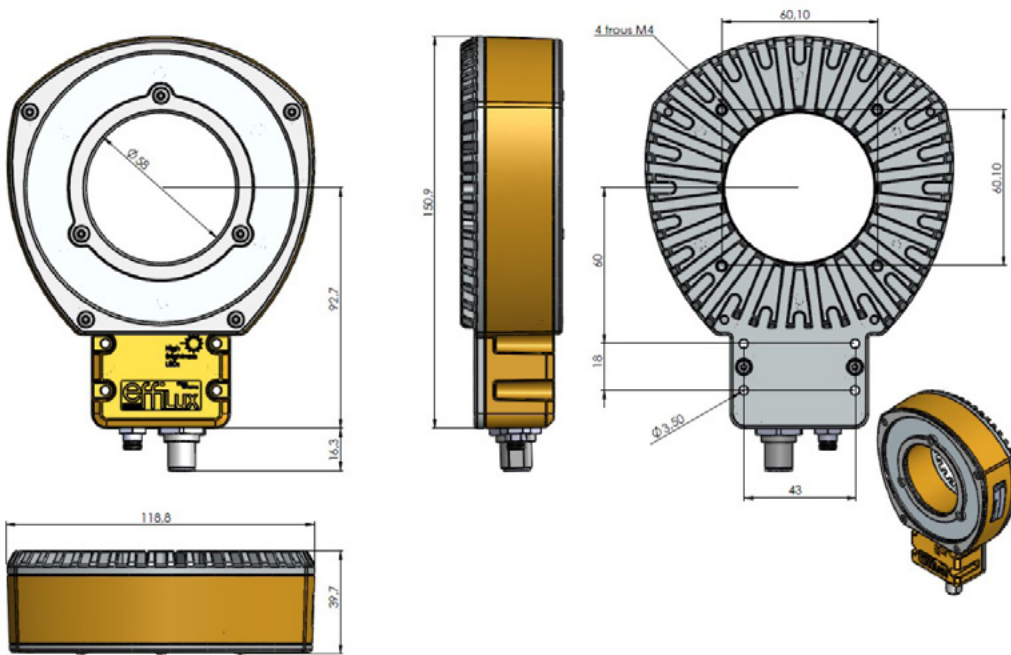
- (1) From the beginning of the TRIG signal to 10% of the max intensity.
- (2) From the 10% to 90% of the maximum intensity.
- (3) From the end of the TRIG signal to 90% intensity.
- (4) From 90% to 10% of the maximum intensity.

TM increases when UTRIG or/and the frequency increases.

(*) **Note:** For the STR option, there is no reponse time value to consider.

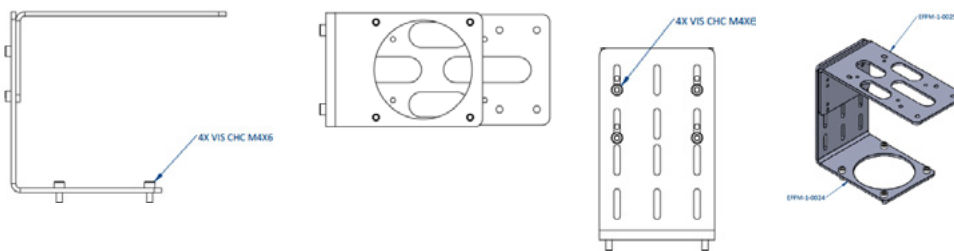
MECHANICAL SPECIFICATIONS (DIMENSIONS IN MM)

Weight	400 g
Dimensions	117mm x 151mm x 40mm
Clear aperture	58 mm
Material	Device body: Aluminum alloy & ABS
Fastener	M4 screws
IP rating	IP65 (except with polarizer accessory: IP50) For extended use with water, use a plastic cap on the unused connector (M8 or M12)

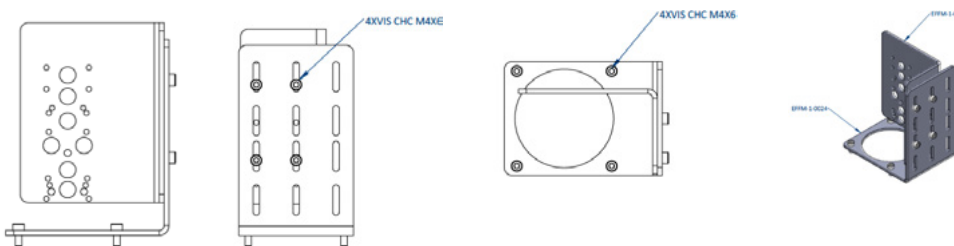


Combinations between camera supports

EFFM-1-HORI : EFFM-1-0024 + EFFM-1-0025



EFFM-1-VERT : EFFM-1-0024 + EFFM-1-0026



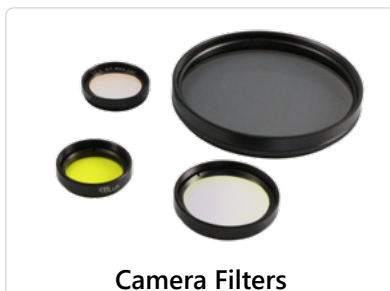
ACCESSORIES

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



Camera mounting

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



Camera Filters

EFFO-FLR-...



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
M8
2meters: EFFC-CAB-M8-F-3-D-L2
5meters: EFFC-CAB-M8-F-3-D-L5
10meters: EFFC-CAB-M8-F-3-D-L10



Pulse controller

Pulse controller
EFFI-IPSC4
Cables
2 meters: EFFC-CAB-M8-SUBD-FM-4-DD-L2
5 meters: EFFC-CAB-M8-SUBD-FM-4-DD-L5
10 meters: EFFC-CAB-M8-SUBD-FM-4-DD-L10

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 January 2025 and may be changed without prior notice.



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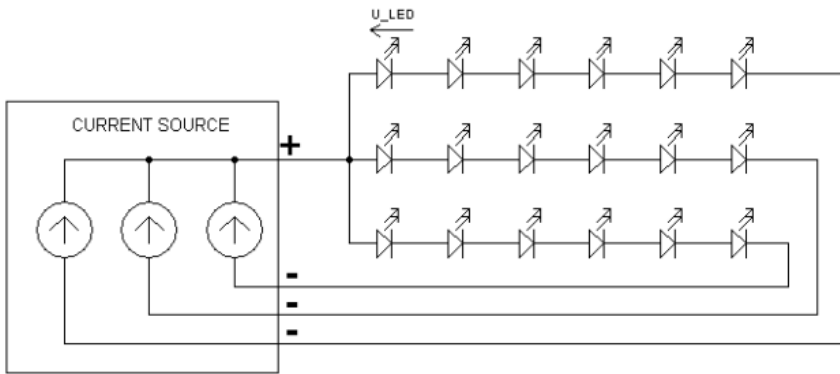
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Fax: +33 9 72 11 21 69
Mail: sales@effilux.fr

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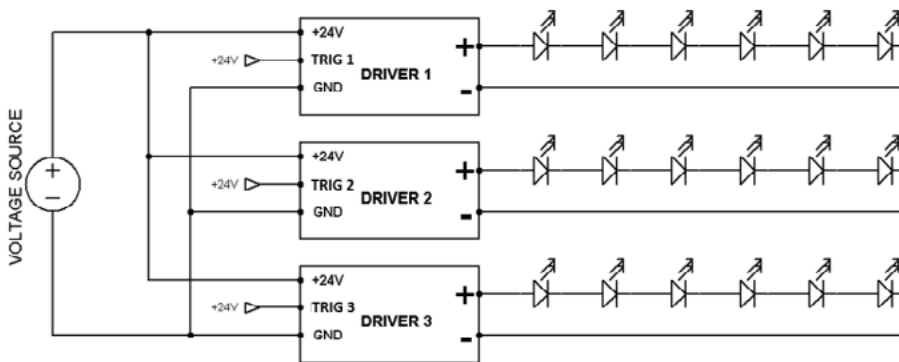
ANNEX 1 - CONNECTORS

M8 CONNECTOR

LED	Forward Voltage U_{LED} (V)
UV	3.50 - 4.30
Blue	2.80 - 3.50
Green	2.90 - 3.70
Red	1.90 - 2.70
IR	1.50 - 2.00
White	3.10 - 3.70



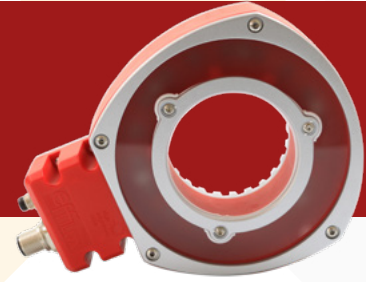
M12 CONNECTOR



Notes: TRIG 1,2 and 3 are connected together inside the product for Monochrome version

effiRING SWIR

Ideal for InGaAs cameras



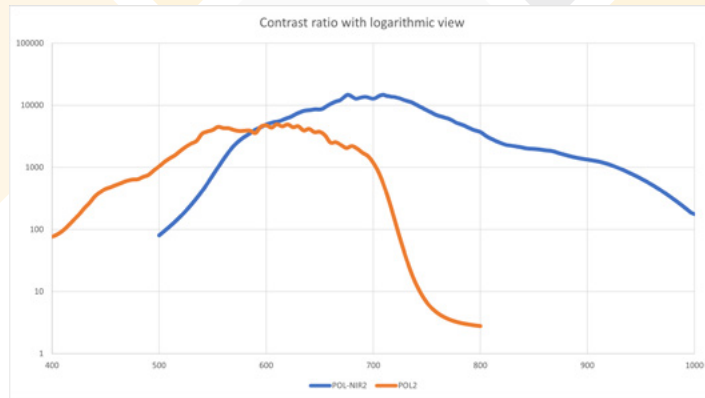
PART-NUMBERING

EFFI-RING	- ZZZZ	- WW	- PP
	Wavelength <ul style="list-style-type: none"> ● 1050 (Infrared) ● 1200 (Infrared) ● 1300 (Infrared) ● 1450 (Infrared) ● 1550 (Infrared) ● 1650 (Infrared) ● MULTI* 	Windows <ul style="list-style-type: none"> TR: Transparent SD: Semi-diffuse OP: Opaline 	Lens position <ul style="list-style-type: none"> P0 P1 P2 P3

*: Contact Efflux for multispectral version. Other wavelengths available upon request.

VERSIONS	
STR	EFFI-RING-ZZZ-WW-PP-STR
OPTICAL OPTIONS	
Polarizer	EFFI-RING-XXX-ZZZ-POL-NIR2

POLARIZER INFRARED

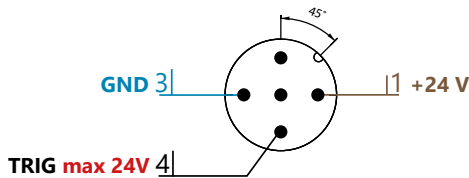


Note: The values of the contrast ratio have been measured with a crossed polarizer.

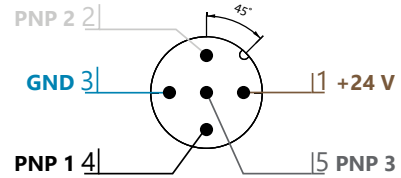
WIRING LAYOUT

Standard configuration

M12 5pins - (Monochrome version)

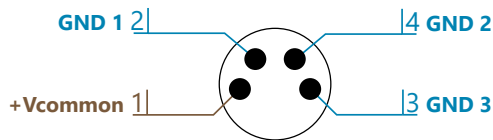


M12 - 5pins (MULTI)

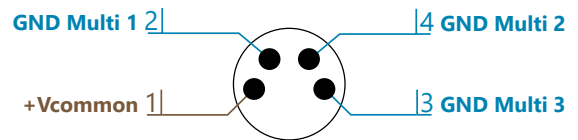


M8 male connector - direct LED control (expert mode)

M8 - male connector (Monochrome version)



M8 - male connector (Multi)

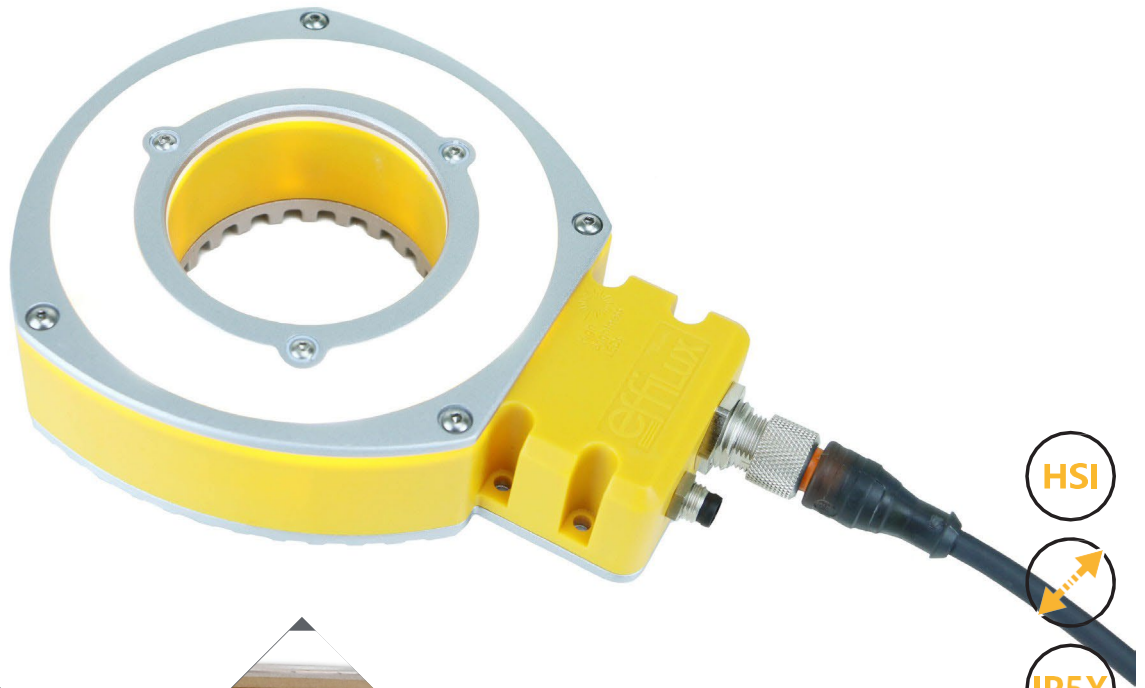


M8 STR CONFIGURATION

Do not exceed the maximum current for a given frequency and a given T_{pulse} indicated in the table below.

T pulse (μ s)	1050 - 1200 - 1300 - 1650 F (Hz)				
	1	5	10	15	20
100 000	0.6 A			0.6 A	
50 000	1 A				
10 000	1.5 A			1.0 A	
1 000	2 A			1.5 A	
100			2 A		

T pulse (μ s)	1450 - 1550 F (Hz)				
	1	5	10	15	20
100 000	0.7 A				
50 000	1 A				
10 000	1.5 A		1 A		
1 000	2 A			1.5 A	
100			2 A		



**Single
Broadband
VIS-NIR LED**

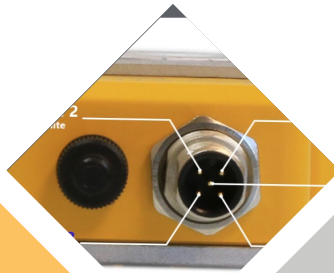
Flexible light

**Adjustable
angle**

Easy-to-mount

**Uniform spectral
emission**

**Suited for HSI
machine vision**



HSI

IP5X

CE

RoHS

**UK
CA**



effiRING-HSI

Hyperspectral VIS-NIR LED ring light

PART NUMBER KEY

Standard version

EFFI-RING-HSI - WW - PP

Window

TR (Transparent)

SD (Semi-diffuse)

OP (Opaline)

Lens position

P0 (90°)

P1 (45°)

P2 (25°)

P3 (10°)

Available options: References

OPTICS

Polarizer accessory	EFFI-RING-HSI- TR -PP- POL2 (Cf. page 5)
Extended spectrum version (400-1000nm)	EFFI-RING-HSI- 910-970 -WW-PP (Contact Effilux, available upon request)

ELECTRONICS

STR version	EFFI-RING-HSI-ZZZ-WW-PP- STR (Direct control no LED protection)
NPN trigger Version	EFFI-RING-HSI-WW-PP- NPN
Kit with diffusers	EFFI-RING-HSI- KIT (Cf. page 4)

TECHNICAL SPECIFICATIONS

effiRING-HSI

Illumination Mode	Strobe or Continuous
Spectrum	400-900nm (standard version) <i>Extended or custom spectrum available upon request. Please contact Effilux.</i>
Power Supply	24V DC +/- 10%
Max. Power Consumption	72W
Connector	M12 - 5pin
Driver version	AutoStrobe
Response Time	<25µs (Rising: 15µs / Falling: 10µs)
Max duty cycle	30 % in AutoStrobe mode
Input signal	PNP trigger input: Light ON: from 5V to 24V / Max. signal consumption: 1mA
Weight	400g
Dimensions	117mm x 151mm x 40mm Inside diameter: 58mm
Material	Device body: Aluminum allow / Window: PMMA
Fastener	M4 screw (4 on heat sink & 4 on outgrowth)
IP rating	IP65
Working temperature	0°C to 40°C
Heating time	Spectral stability is reached after an hour of operation at ambient temperature (25°C)
Regulations	CE - RoHS - REACH - WEEE - IEC 62471 - China RoHS
Country of Origin	France

OPTICAL SPECIFICATONS - STANDARD VERSION

Many possible configurations in just one light

Diffusers

TR : Transparent



SD : Semi-diffuse



OP : Opaline



Depending on the uniformity needed for the application, the user can easily change the diffuser to satisfy the application requirements.

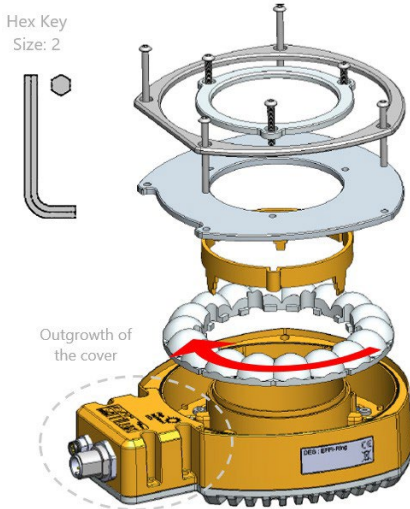
Lens position

The EFFI-Ring-HSI offers flexible lens positioning to control the beam angle. The user can adjust it by himself: the angle can be widened by moving the lens closer to the LEDs or narrowed by moving the lens further away from the LEDs.

Position	P0*	P1	P2	P3
Angle	 90° * without lens	 45°	 25°	 10°



How to change the configuration of your EFFI-Ring-HSI ?



The EFFI-Ring offers flexible lens positioning to control the beam angle and different type of diffusers to adapt the uniformity. The user can easily change the diffuser and the lens position in the field.

kit option

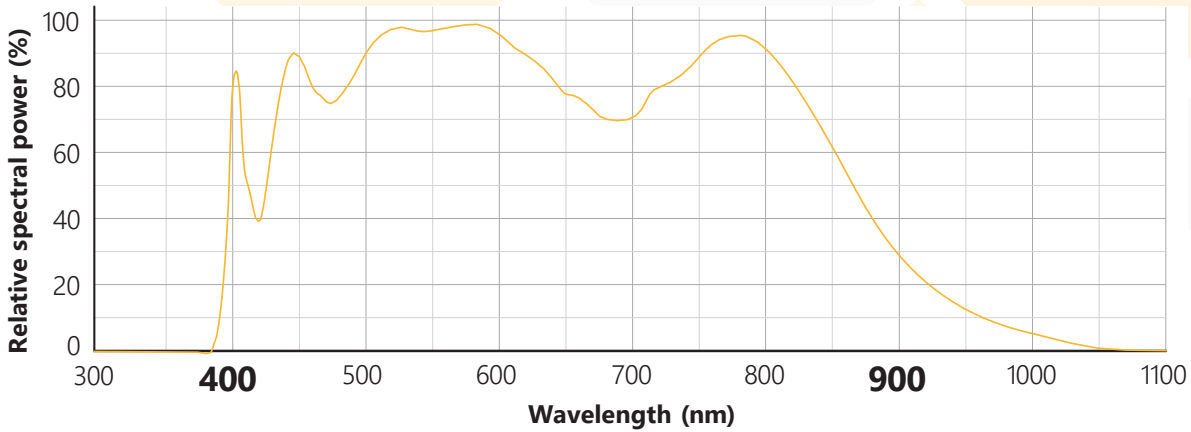
With the KIT option, the light will be delivered as a package including TR, SD and OP windows, and assembled in the default configuration with the lens plate positioned at P2 and the SD diffuser.

The KIT replaces WW-PP in the part number. Example: EFFI-RING-HSI-WW-PP becomes EFFI-RING-HSI-KIT

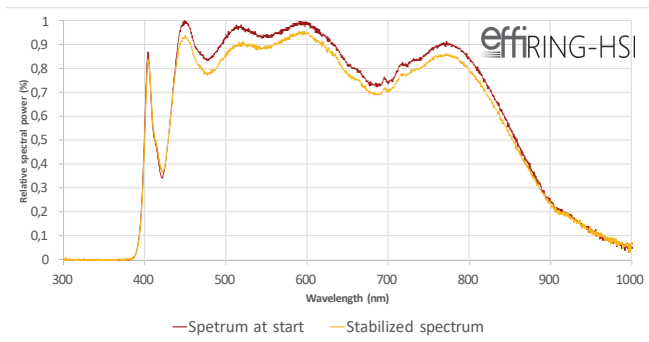


Spectrum

EFFI-Ring-HSI standard spectrum



Evolution of the broadband spectrum during stabilization time



The EFFI-Ring-HSI requires time to stabilize his spectral emission. Please note that during this stabilization, the spectral power may decrease by maximum 15%.

At ambient temperature 25°C, in continuous mode this stability is reached an hour after switching on the product.

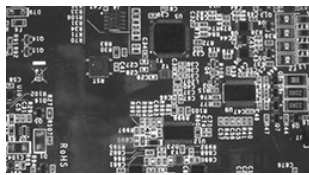
Option: Polarizer accessory

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

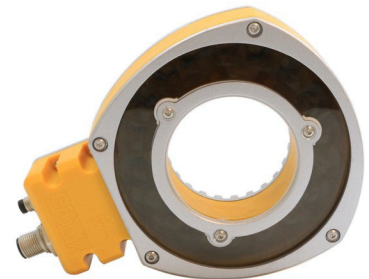
The user can insert directly the polarizer inside the EFFI-Ring-HSI, under the window.



Without polarizer



With polarizer



Important notes:

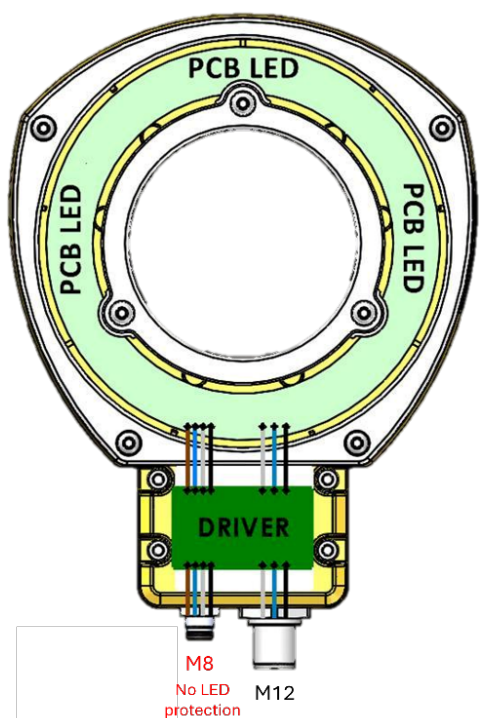
- With the EFFI-Ring-HSI, it is necessary to use a NIR polarizer and a VIS polarizer (Common PN: EFFE-RING-HSI-POL2-XXX).
- The polarization is optimal with a transparent window, the use of diffuser can depolarize the light.

ELECTRONICAL SPECIFICATIONS - STANDARD VERSION

Wiring layout - Standard version

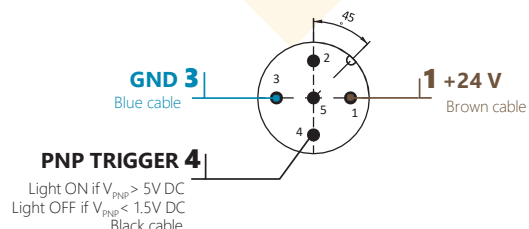
The EFFI-Ring-HSI requires 24V DC input power. Note the trigger pin needs to be connected either to the 24V DC signal for Continuous mode or to a PNP Trigger signal for AutoStrobe mode.

The M12 is for a standard use while the M8 is for a direct control of LED without direct use of built-in drivers.



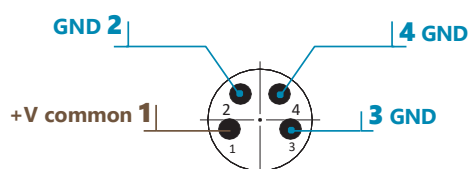
M12 (A-coded)- 5 pins

male connector

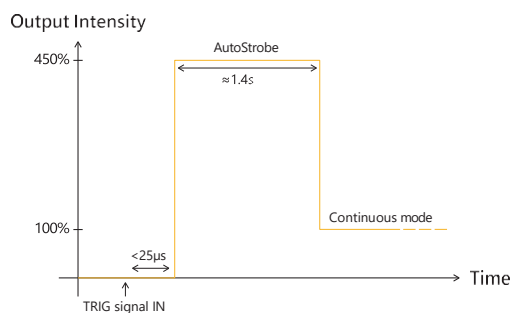


M8 - 4 pins (Direct control - Expert mode)

male connector - **WARNING: no LED protection!**



AutoStrobe feature



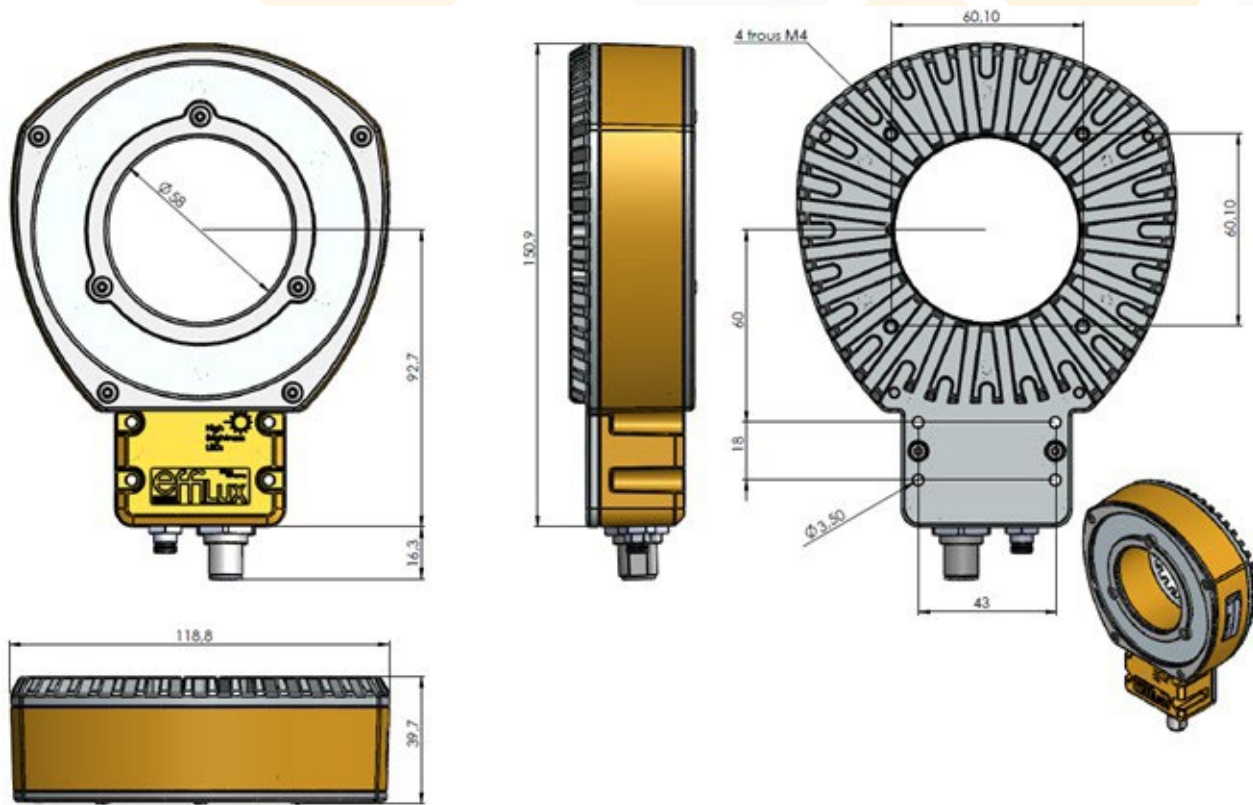
The integrated driver with AutoStrobe feature allows for 450% increased intensity while being strobed when compared to continuous mode. Strobing time lasts for 1.4 seconds.

Respect a duty cycle of 30% in strobe mode.

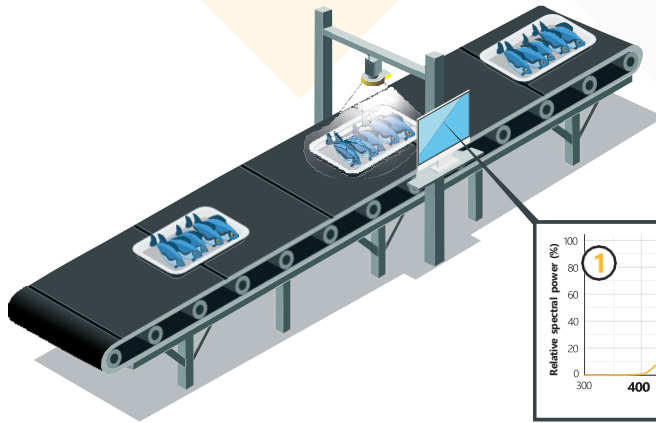
Response time	
Rising time	15 μs
Falling time	10 μs

MECHANICAL SPECIFICATIONS

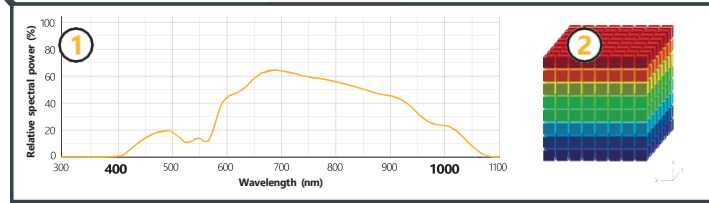
General dimensions



Collect more data with hyperspectral imaging



Hyperspectral imaging is an emerging technology in machine vision that integrates conventional imaging with spectroscopy. An enormous range of new applications for image processing in the visible-NIR region of the spectrum are now possible using this technique.

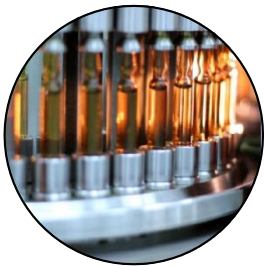


Here an example of an application using Effilux HSI lighting for optical control on fishes.

HSI lightings coupled with hyperspectral cameras allow to access both spectral and spatial information at the same time (2: hyperspectral data cube). In this case, spectral signature (1) can be access in a rapid and efficient way to ensure the good quality of products.

Hyperspectral illumination for a wide variety of domains

Some examples



Medical and pharmaceutical analysis



Waste sorting and recycling



Hyperspectral microscopy



Food sorting and quality analysis



Defect inspections

ACCESSORIES

Please refer to the specific documentation for additional information on the accessories of the EFFI-Ring-HSI.



Diffusers

Transparent: EFFO-RING-TR
Semi-diffuse: EFFO-RING-SD
Opaline: EFFO-RING-OP



Polarizer / Linescan

Polarizer:EFFO-RING-HSI-POL2



Extension Cables

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



Fasteners*

Camera support: EFFM-1-0024
Camera support: EFFM-1-0025
Camera support: EFFM-1-HORI



Power supplies

Power supply: EFFI-PWR- ...
Compact power supply:
EFFI-SPWR-090W-24V-102-YY*

*See the drawings on ANNEX page 11

**YY = type of outlet: UK, CH, EU, US

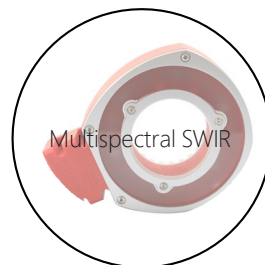
CUSTOMIZATIONS



Connector options



Other spectrum



Multispectral SWIR

REGULATIONS

In accordance with machinery directive, the CE and UKCA marks indicate that the product complies with the relevant EU and UK legislation.

Please refer to the "General warnings & precautions for use" for detailed information regarding standards and regulations.



CONTACT INFORMATION

Please refer to the specific documentation (datasheet, user manual, drawing and general warnings & precautions for use) for complementary information.

Contents of this document are based on information available as of June-2021 and may be changed without prior notice.



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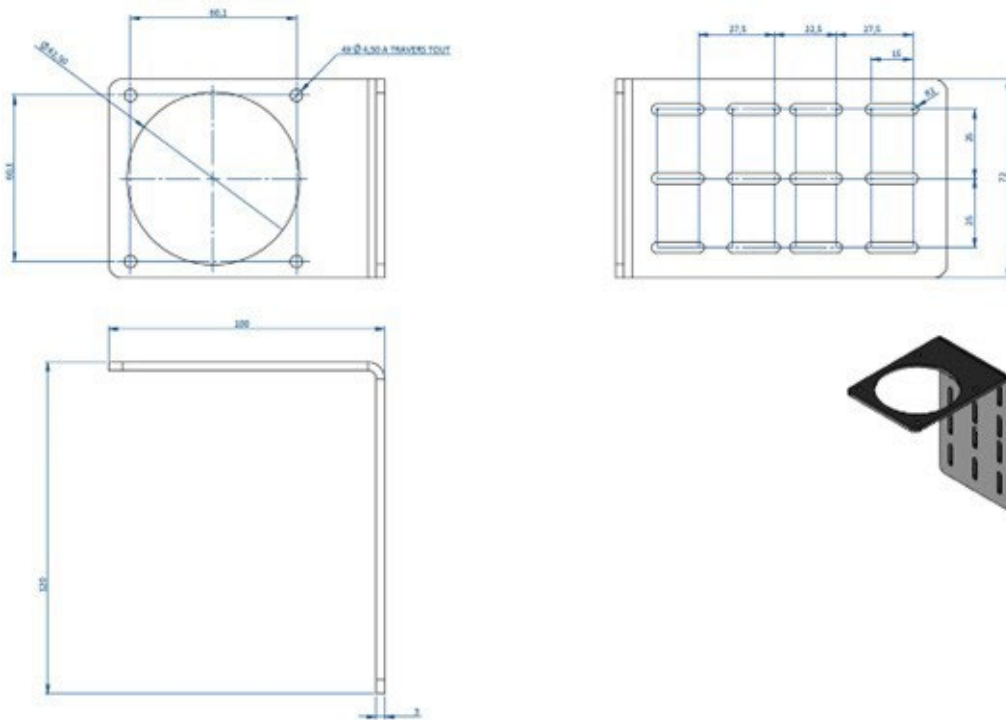
Tel: +33 9 72 38 17 80
Fax: +33 9 72 11 21 69
Mail: sales@effilux.fr

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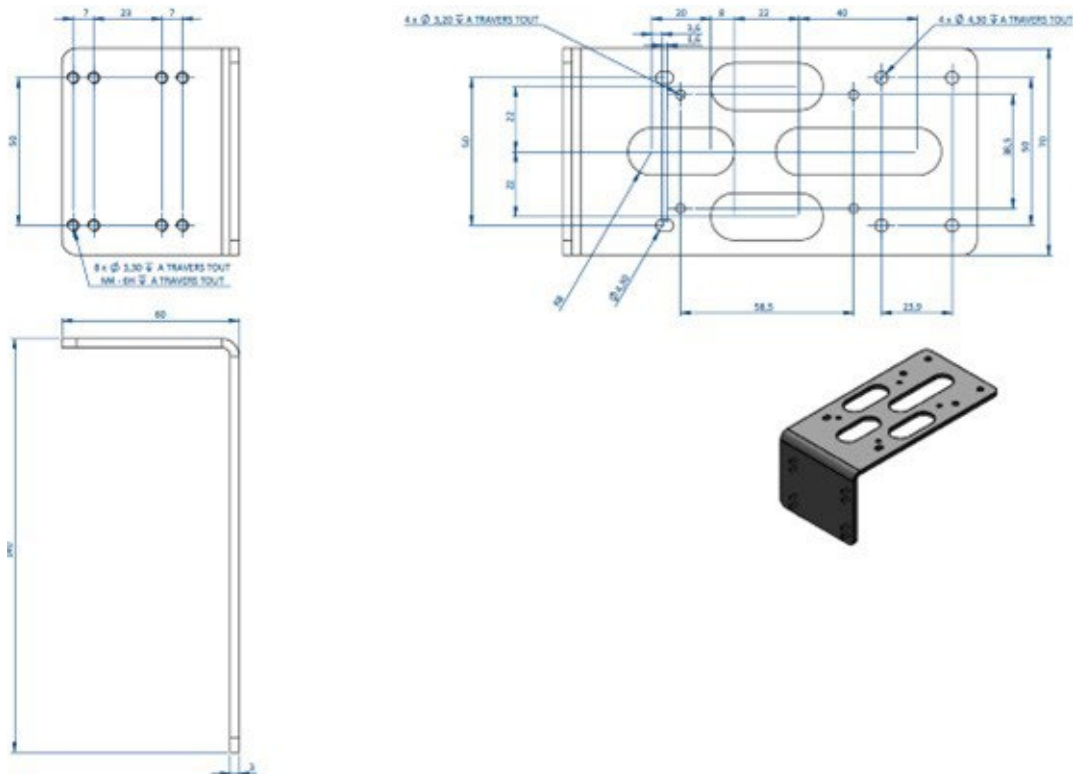
ANNEX - MECHANICAL ACCESSORIES DIMENSIONS

dimensions of camera supports

EFFM-1-0024



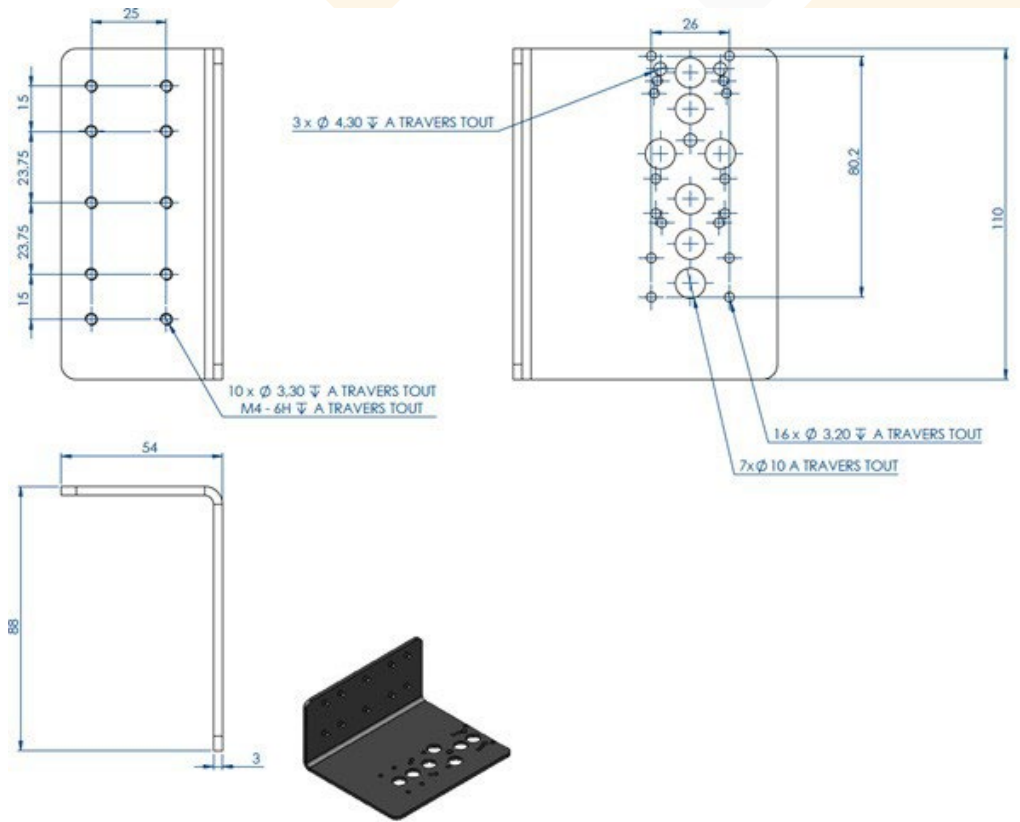
EFFM-1-0025



ANNEX - MECHANICAL ACCESSORIES DIMENSIONS

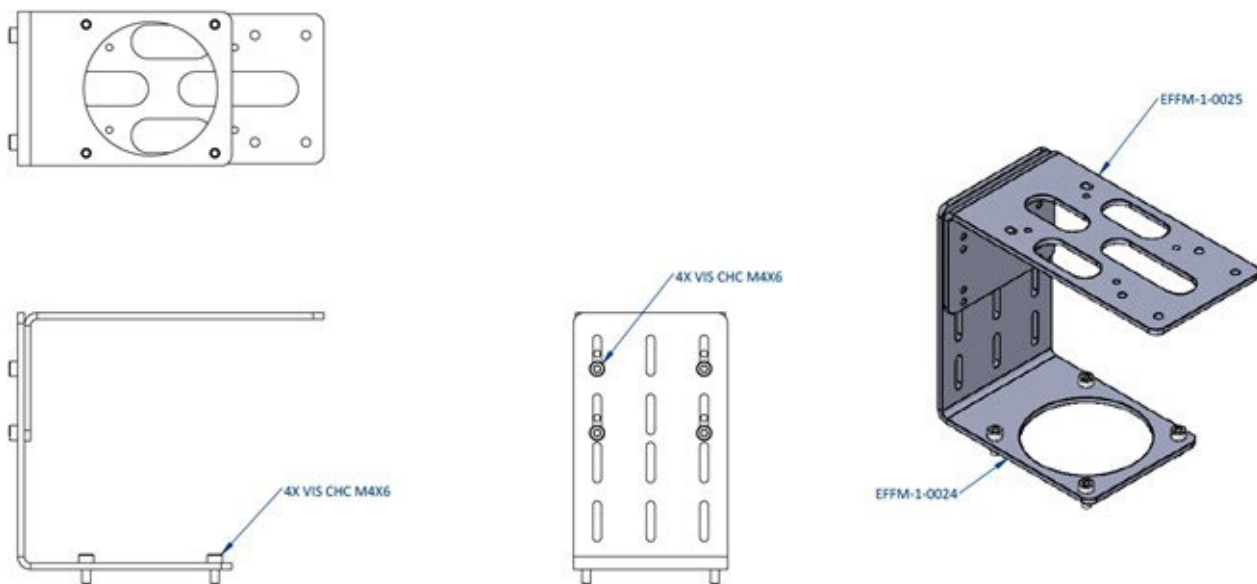
dimensions of camera supports (CONTINUED)

EFFM-1-0026



dimensions of combined camera supports

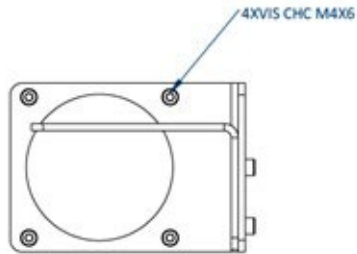
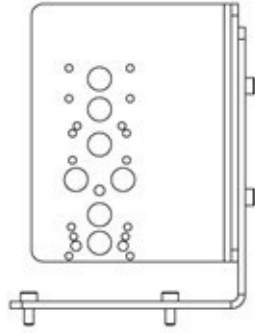
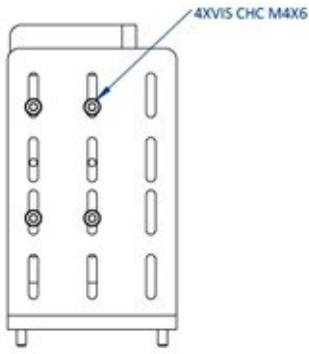
EFFM-1-HORI : EFFM-1-0024 + EFFM-1-0025



ACCESSORIES

dimensions of combined camera supports (CONTINUED)

EFFM-1-VERT : EFFM-1-0024 + EFFM-1-0026





Convertible

**Autostrobe
feature**

Flexible

Segmented light

High power



effiSRING

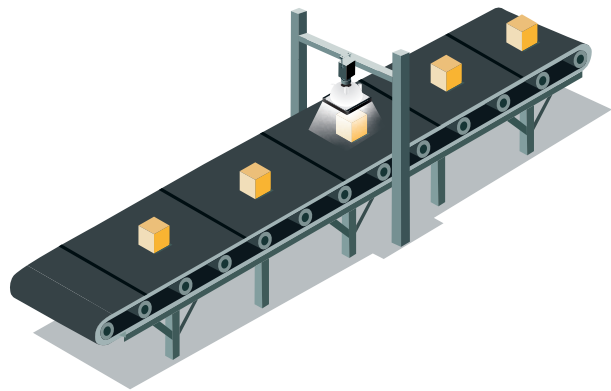
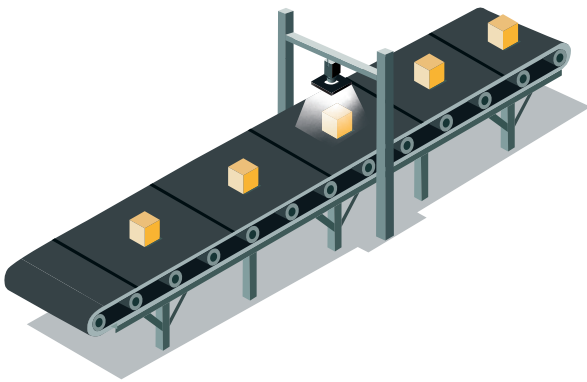
Compact and flexible ring with a small compact dome

INTRODUCTION

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ELECTRONICAL SPECIFICATIONS.....	PAGE 6
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APPLICATIONS



RELATED PRODUCT

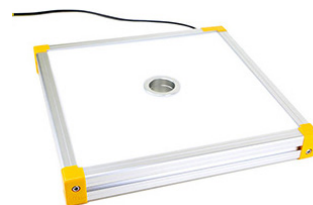
Refer to the datasheets of the products below for more details on those related products.

EFFI-RING



Adjustable beam power ring

EFFI-FD



Flat Dome Light

PART NUMBERING

STANDARD VERSION

EFFI-SRING	- XXX	- Z	- Z	- Z	- Z	WW
	Diameter of the LED ring (mm) 100	CH1	CH2	CH3	CH3	Windows*
		● B (Blue)	● B (Blue)	● B (Blue)	● B (Blue)	TR Transparent
		● G (Green)	● G (Green)	● G (Green)	● G (Green)	SD Semi-diffuse
		● R (Red)	● R (Red)	● R (Red)	● R (Red)	OP Opaline
		● IR (Infrared)	● IR (Infrared)	● IR (Infrared)	● IR (Infrared)	
		○ W (White)	○ W (White)	○ W (White)	○ W (White)	

Notes: If not specified, default opaline window.

AVAILABLE VERSIONS & OPTIONS

SDOME version

EFFI-SRING	- SDOME	- XXX	- Z	- Z	- Z	- Z	- WW
------------	---------	-------	-----	-----	-----	-----	------

- In this version, a small dome is added on top of the EFFI-SRING for a highly diffusive illumination.

Continuous version

EFFI-SRING	- XXX	- Z	- Z	- Z	- Z	- WW	- CW
------------	-------	-----	-----	-----	-----	------	------

- In this version, the EFFI-SRing directly turns on at continuous intensity instead of the high power autostrobe.

Polarizer option

EFFI-SRING	- XXX	- Z	- Z	- Z	- Z	- TR	- POL2
------------	-------	-----	-----	-----	-----	------	--------

- Using the Polarizer accessory, it is possible to eliminate glare from the workpiece making it easier to acquire a suitable image for the application with no hot spot.

Diffuse film + polarizer option

EFFI-SRING	- XXX	- Z	- Z	- Z	- Z	- TR	- DIF-POL2
------------	-------	-----	-----	-----	-----	------	------------

- Use the diffuse film under the polarizer to eliminate even more the hot spots.

Kit option

EFFI-SRING	- XXX	- Z	- Z	- Z	- Z	- TR	- KIT
------------	-------	-----	-----	-----	-----	------	-------

- This diffuser kit includes the different films and windows.
- It is also available with the SDOME version, it then includes the small dome to add on top of the EFFI-SRING.

TECHNICAL SPECIFICATIONS



Illumination Mode	Strobe or continuous mode
Wavelengths	465nm, 525nm, 625nm, 850nm, White
Power Supply	24V DC
Connector(s)	M12 - 8 pins
Power Consumption per Channel	Depends of the wavelength
Weight	SRING: 300g SDOME: 750g
Thickness	SRING: 15mm SDOME: 69.9mm
Material	Device body: Aluminum; Windows: Acrylic
Fastener	Related to the dimensions
IP rating	IP5X
Operation environment	Temperature: 0°C to 40°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

ILLUMINATED SPOT DIAMETER⁽¹⁾ VS WORKING DISTANCE

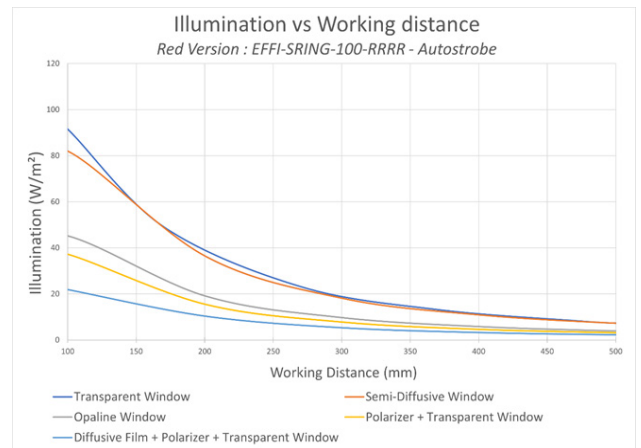
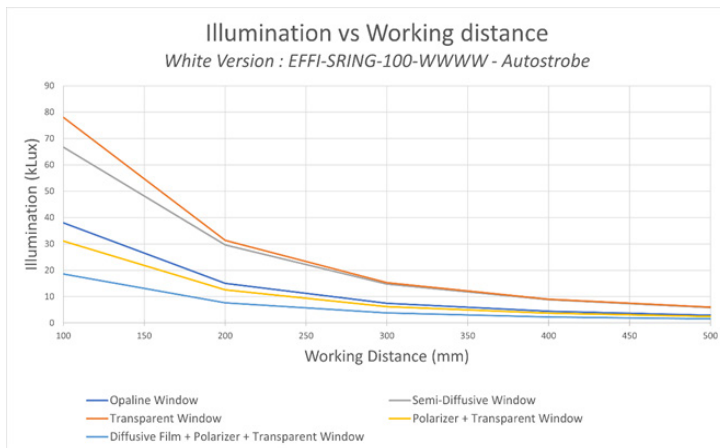


(1): From 50% to 100% of the peak value of illumination

ILLUMINATION VS WORKING DISTANCE

Notes:

- Maximum illumination at the center of the spot
- Ratio between overdrive strobe mode and continuous mode : X4

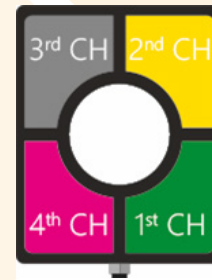
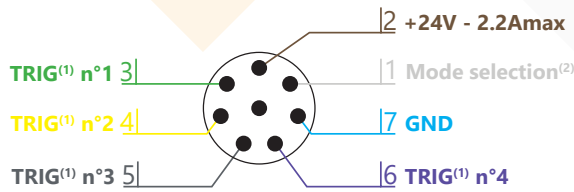


Color	INFRARED (850nm)	RED (625nm)	GREEN (525nm)	BLUE (465nm)
Power factor between the different wavelength	X2.3	X2	X1	X1.1

ELECTRONICAL SPECIFICATIONS

CONTACT ARRANGEMENT

M12 8pins - male connector



Notes:

- (1): max 24V
- (2): To select between PNP and NPN mode. If the pin 1 «Mode selection» is:
 Not connected: PNP mode → Light ON when $V_{TRIG} > 2.5V$
 Connected 24V: NPN mode → Light ON when $V_{TRIG} < 1V$
- The EFFI-SRing / EFFI-SDome requires 24V DC input power.
- The trigger pin of each channel needs to be connected either to the 24V DC signal for Continuous mode or to a PNP Trigger signal for Overdrive strobe mode.

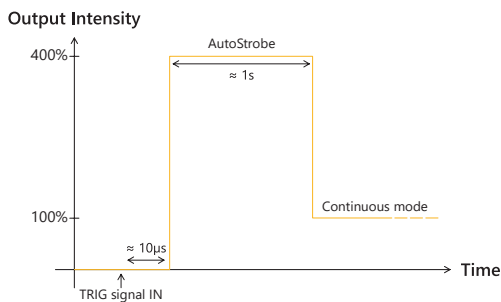
POWER CONSUMPTION (BASED ON WHITE LED)

Peak power in autostroke	Continuous
45W	10W

SIGNAL CONSUMPTION

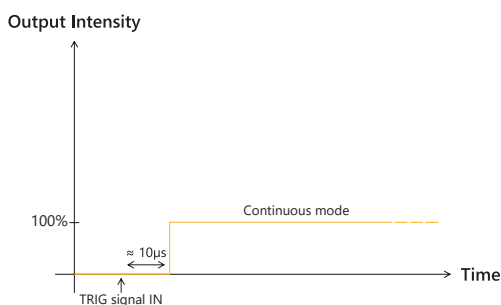
Mode selection consumption (pin1)	TRIG consumption (pins 3, 4, 5 and 6)
0.5mA max	0.1mA max on each pin

AUTOSTROBE



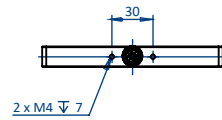
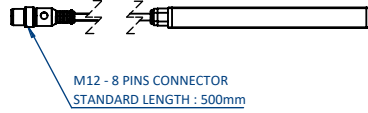
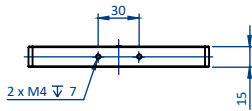
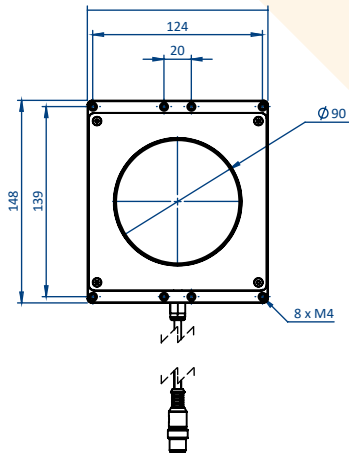
Please respect a duty cycle of 25% maximum. Duty cycle = $(T_{ON} / (T_{ON} + T_{OFF}))$

OPTION: CONTINUOUS VERSION

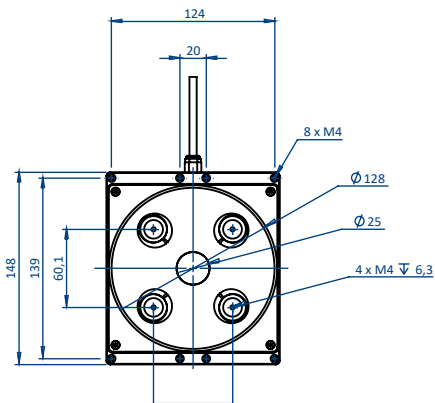
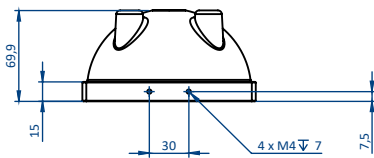
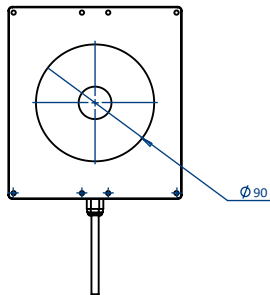


MECHANICAL SPECIFICATIONS

EFFI-SRING CONFIGURATION



EFFI-SDOME CONFIGURATION



ACCESSORIES

Please refer to the specific documentation for additional information on the accessories of the EFFI-SRING-SDOME.



Extension cables

M12

2meters: EFFC-CAB-M12-FM-8-DD-L2

5meters: EFFC-CAB-M12-FM-8-DD-L5

10meters: EFFC-CAB-M12-FM-8-DD-L10



SWITCH 4 Channel

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



Camera mounting

EFFM-1-HORI-STEEL-V2

EFFM-1-VERT-STEEL-V2

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 April-2025 and may be changed without prior notice.



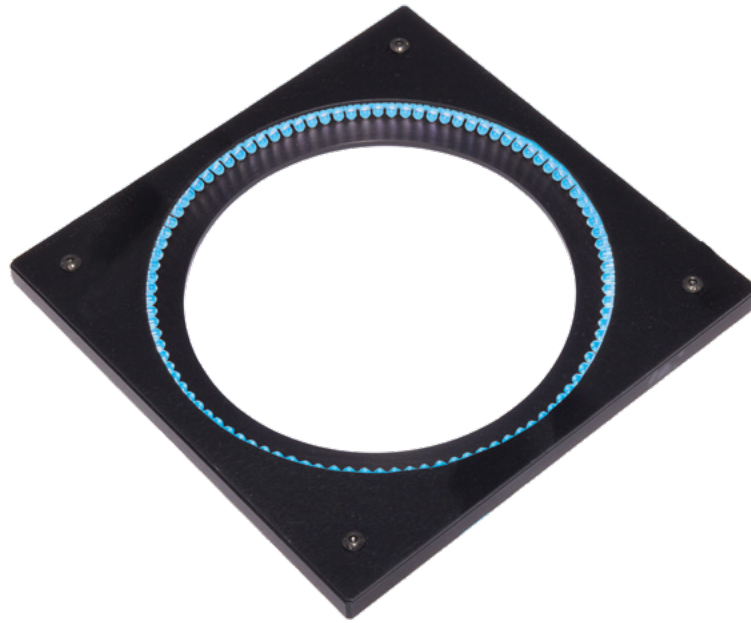
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Precise

Compact

Customizable



effiRLLA

Ring lighting

INTRODUCTION

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PART NUMBERING

STANDARD VERSION

EFFI-RLLA	- XX	- YYY	- Z
	Angle	Diameter	Wavelength (nm)
	90	045	● B (470)
		060	● G (525)
		100	● R (630)
			● I (940)
			○ W (000)

GENERAL SPECIFICATIONS



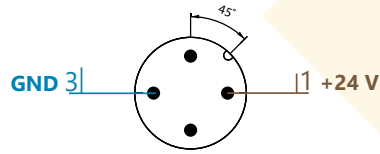
Illumination Mode	Continuous
Wavelengths	White, Red (630nm), Green (525nm), Blue (470nm), Infrared (940nm)
Input current	see the corresponding table (page 4)
Power Consumption	see the corresponding table (page 4)
Connector(s)	M12 - 4 pins
Weight	Between 80g and 160g
Dimensions	see mechanicals specifications
Operation environment	Temperature: 0°C to 40°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

ELECTRONICAL SPECIFICATIONS

CONTACT ARRANGEMENT

All the products of the EFFI range are supplied with a 24V DC constant voltage.

M12 4pins - male connector



Notes: Please use within 24V, otherwise it may cause temperature rise or could diminish the lifetime.

POWER CONSUMPTION

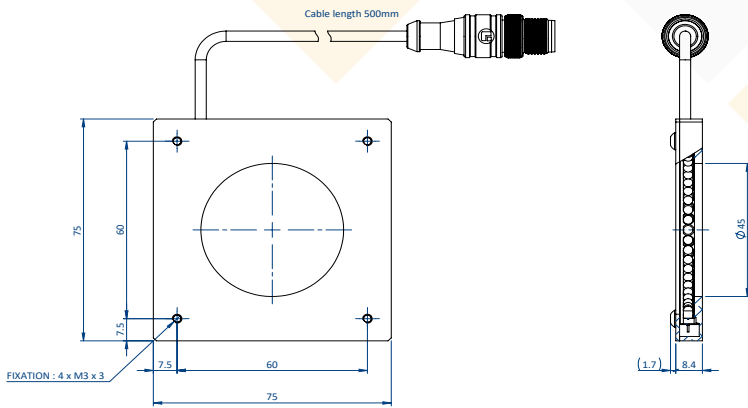
	Wavelength	
	Red (630nm), Green (525nm), Blue (470nm)	White
EFFI-RLLA-90-045-Z	2.6W	4.3W
EFFI-RLLA-90-060-Z	3.1W	5.2W
EFFI-RLLA-90-100-Z	5.1W	8.6W

INPUT CURRENT

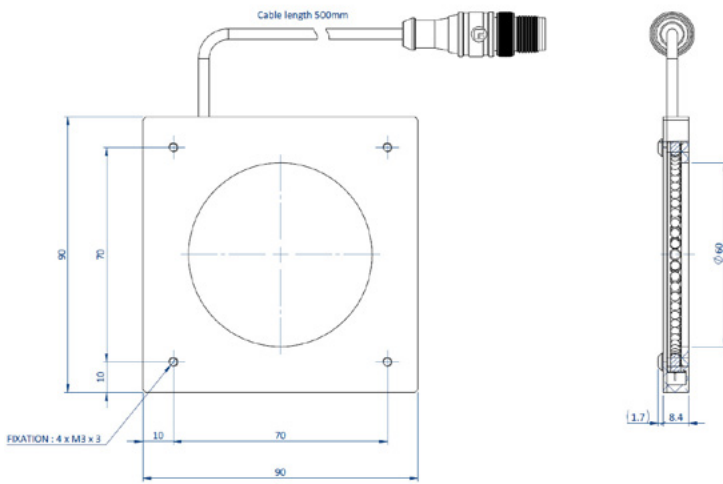
	Wavelength	
	Red (630nm), Green (525nm), Blue (470nm)	White
EFFI-RLLA-90-045-Z	100mA	170mA
EFFI-RLLA-90-060-Z	120mA	200mA
EFFI-RLLA-90-100-Z	200mA	340mA

MECHANICAL SPECIFICATIONS (DIMENSIONS IN MM)

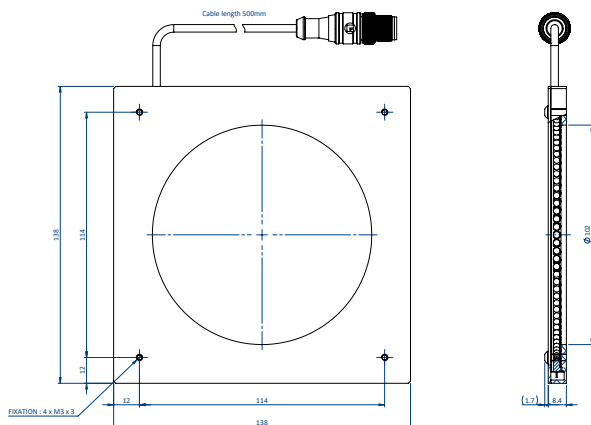
EFFI-RLLA-90-045-Z



EFFI-RLLA-90-060-Z



EFFI-RLLA-90-100-Z



CONTACT INFORMATION

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Precise

Uniform

Compact



effiRLSQ

Ring lighting

INTRODUCTION

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PART NUMBERING

STANDARD VERSION

EFFI-RLSQ	- XX	- YYY	- Z
	Angle	Diameter	Wavelength (nm)
	00	050	● B (470)
		070	● G (525)
			● R (630)
			● I (940)
			○ W (000)

GENERAL SPECIFICATIONS



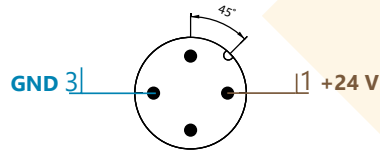
Illumination Mode	Continuous
Wavelengths	White, Red (630nm), Green (525nm), Blue (470nm), Infrared (940nm)
Input current	see the corresponding table (page 4)
Power Consumption	see the corresponding table (page 4)
Connector(s)	M12 - 4 pins
Weight	Between 60g and 80g
Dimensions	see mechanicals specifications
Operation environment	Temperature: 0°C to 40°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

ELECTRONICAL SPECIFICATIONS

CONTACT ARRANGEMENT

All the products of the EFFI range are supplied with a 24V DC constant voltage.

M12 4pins - male connector



Notes: Please use within 24V, otherwise it may cause temperature rise or could diminish the lifetime.

POWER CONSUMPTION

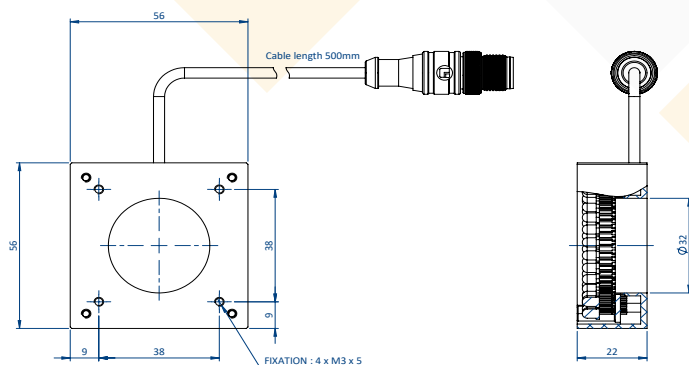
	Wavelength	
	Red (630nm), Green (525nm), Blue (470nm)	White
EFFI-RLSQ-00-050-Z	3.1W	5.6W
EFFI-RLSQ-00-070-Z	6.1W	11W

INPUT CURRENT

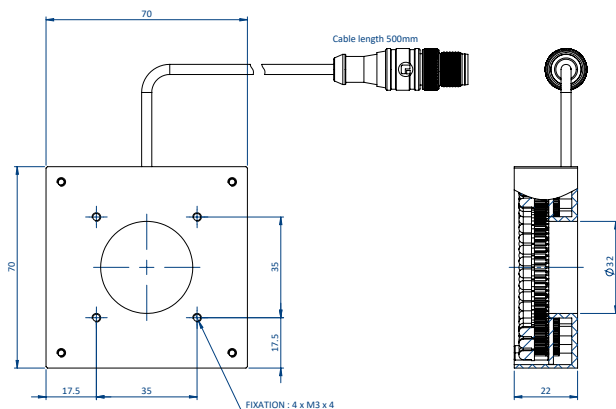
	Wavelength	
	Red (630nm), Green (525nm), Blue (470nm)	White
EFFI-RLSQ-00-050-Z	120mA	240mA
EFFI-RLSQ-00-070-Z	220mA	400mA

MECHANICAL SPECIFICATIONS (DIMENSIONS IN MM)

EFFI-RLSQ-00-050-Z



EFFI-RLSQ-00-070-Z



ACCESSORIES

Polarizer

EFFO-RLSQ-POL-00-050

EFFO-RLSQ-POL-00-070

Diffuser

EFFO-RLSQ-OP-00-050

EFFO-RLSQ-OP-00-070

CONTACT INFORMATION

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Direct

Low angle

Darkfield

**Glare
controlled**



effiRLSW

Ring lighting

INTRODUCTION

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PART NUMBERING

STANDARD VERSION

EFFI-RLSW	- XX	- YYY	- Z
	Angle	Product diameter	Wavelength (nm)
	00	030	● B (470)
		040	● G (525)
		050	● R (630)
		070	● I (940)
		090	○ W (000)
	60	070	
		075	
		125	
		175	

GENERAL SPECIFICATIONS



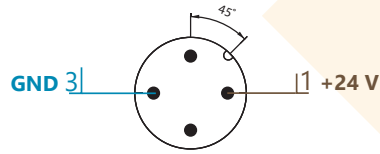
Illumination Mode	Continuous
Wavelengths	White, Red (630nm), Green (525nm), Blue (470nm), Infrared (940nm)
Input current	see the corresponding table (page 4)
Power Consumption	see the corresponding table (page 4)
Connector(s)	M12 - 4 pins
Weight	Between 40g and 160g
Dimensions	see mechanicals specifications
Operation environment	Temperature: 0°C to 40°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

ELECTRONICAL SPECIFICATIONS

CONTACT ARRANGEMENT

All the products of the EFFI range are supplied with a 24V DC constant voltage.

M12 4pins - male connector



Notes: Please use within 24V, otherwise it may cause temperature rise or could diminish the lifetime.

POWER CONSUMPTION & INPUT CURRENT

	Wavelength			
	Red (630nm), Green (525nm), Blue (470nm), IR (940nm)		White	
	Power consumption	Input current	Power consumption	Input current
EFFI-RLSW-00-030-Z	1.6W	60mA	2.6W	100mA
EFFI-RLSW-00-040-Z	2.2W	80mA	3.2W	130mA
EFFI-RLSW-00-050-Z	3.1W	120mA	4.7W	180mA
EFFI-RLSW-00-070-Z	5.8W	230mA	7.8W	300mA
EFFI-RLSW-00-090-Z	11W	420mA	13W	500mA

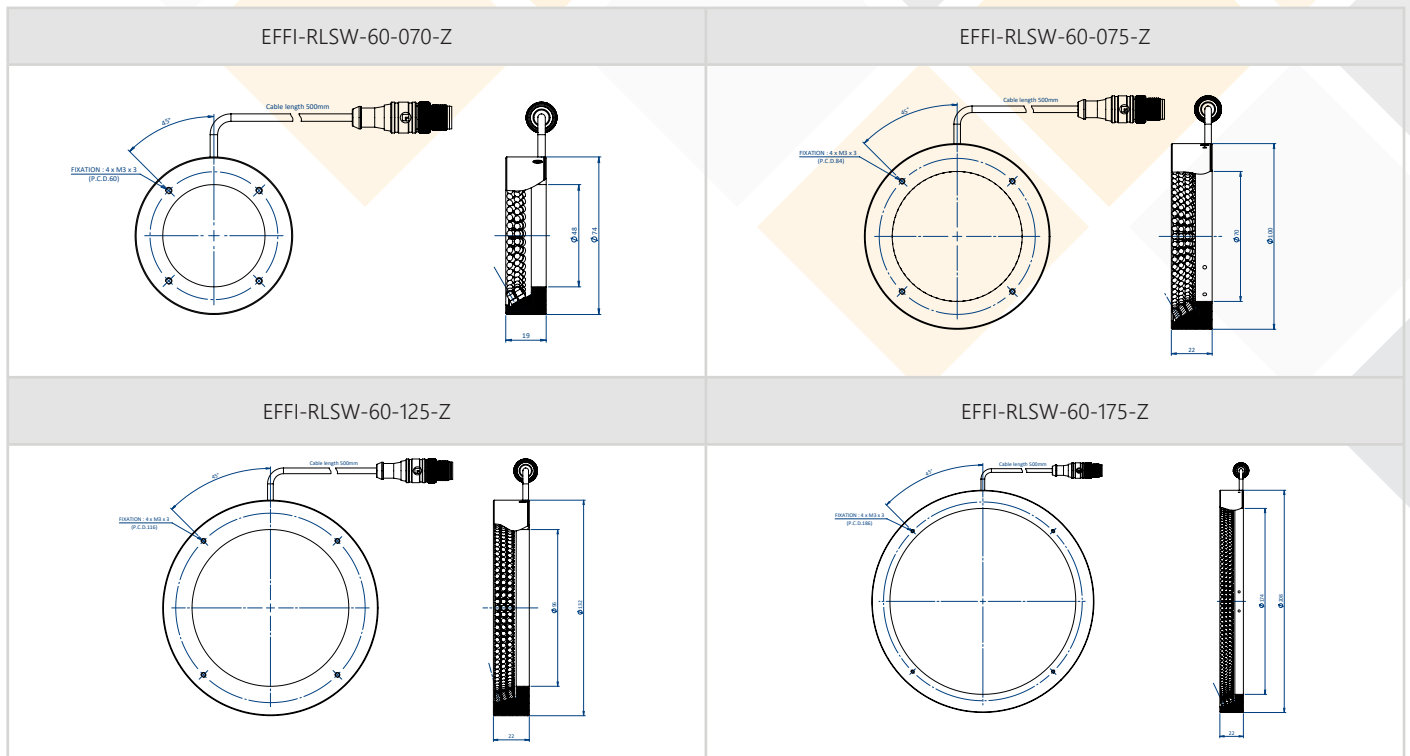
	Wavelength			
	Red (630nm), Green (525nm), Blue (470nm), IR (940nm)		White	
	Power consumption	Input current	Power consumption	Input current
EFFI-RLSW-60-070-Z	4.6W	180mA	7.8W	300mA
EFFI-RLSW-60-075-Z	9.1W	360mA	16W	600mA
EFFI-RLSW-60-125-Z	13W	500mA	20W	750mA
EFFI-RLSW-60-175-Z	22W	860mA	33W	1300mA

MECHANICAL SPECIFICATIONS (DIMENSIONS IN MM)

EFFI-RLSW-00-YYY-Z

EFFI-RLSW-00-030-Z	EFFI-RLSW-00-040-Z
<p>EFFI-RLSW-00-030-Z</p> <p>Cable length 500mm</p> <p>90°</p> <p>FIXATION - 4 x M3 x 3 (P.C.D. 20)</p> <p>Ø 32</p> <p>16</p>	<p>EFFI-RLSW-00-040-Z</p> <p>Cable length 500mm</p> <p>90°</p> <p>FIXATION - 4 x M3 x 3 (P.C.D. 28)</p> <p>Ø 32</p> <p>18</p>
EFFI-RLSW-00-050-Z	EFFI-RLSW-00-070-Z
<p>EFFI-RLSW-00-050-Z</p> <p>Cable length 500mm</p> <p>90°</p> <p>FIXATION - 4 x M3 x 3 (P.C.D. 40)</p> <p>Ø 50</p> <p>16</p>	<p>EFFI-RLSW-00-070-Z</p> <p>Cable length 500mm</p> <p>90°</p> <p>4 x M3 x 3 (P.C.D. 50)</p> <p>Ø 70</p> <p>20</p>
EFFI-RLSW-00-090-Z	
<p>EFFI-RLSW-00-090-Z</p> <p>Cable length 500mm</p> <p>90°</p> <p>FIXATION - 4 x M3 x 3 (P.C.D. 70)</p> <p>Ø 90</p> <p>20</p>	

EFFI-RLSW-60-YYY-Z



ACCESSORIES

Polarizer
EFFO-RLSW-POL-00-030
EFFO-RLSW-POL-00-040
EFFO-RLSW-POL-00-050
EFFO-RLSW-POL-00-070
EFFO-RLSW-POL-00-090

Accessory support
EFFM-RLSW-00-030
EFFM-RLSW-00-040
EFFM-RLSW-00-050
EFFM-RLSW-00-070
EFFM-RLSW-00-090

Diffuser
EFFO-RLSW-OP-00-030/ 40/ 50/ 70/ 90
EFFO-RLSW-OP-60-070/ 75/ 125/ 175

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 August -2025 and may be changed without prior notice.



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