Segmented Light

Autostrobe feature

4 independent channels: segmented light

High-power products with Autostrobe feature

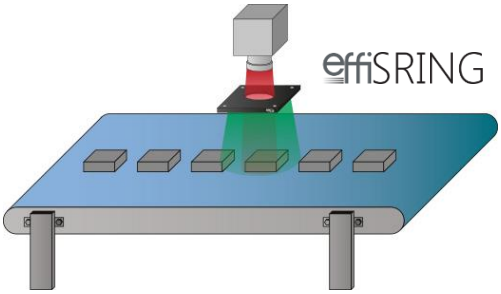
Flexible product: EFFI-SRING easily convertible into an EFFI-SDOME

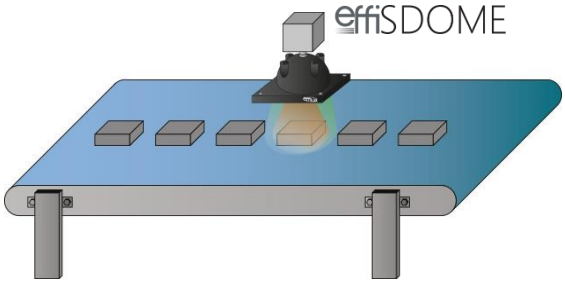
Full range of colors: from blue to IR, White

Long lifetime and minimal maintenance

Electronics	Connectors	M12 – 8 pins				
	Power supply	24V DC				
	Driver Mode	Autostrobe (NPN or PNP)				
	Illumination mode	Strobe or continuous mode				
	Max Power Consumption per channel	Blue: 10W per channel	Green: 10W per channel	Red: 10W per channel	Infrared: 10W per channel	White: 15W per channel
Optics	Wavelength	Various wavelengths (from blue to IR, White) for each quadrant				
Mechanics	Fasteners	Related to the dimensions				
	Material	Device body: Aluminum; Windows: Acrylic				
Environment	Working temperature	0°C to 40°C				
	IP rating	IPXX				

Applications





Part Number – EFFI-SRING

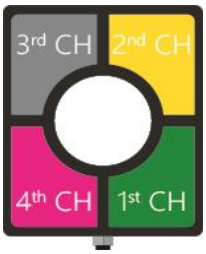
EFFI-SRING

EFFI-SRING-100-ZZZZ-WW

100: Size (mm) (Diameter of the LED ring)

ZZZZ: Colors / Wavelength (nm)

• B: Blue 465nm	• G: Green 525nm	• R: Red 625nm	• IR: Infrared 850nm	○ W: White (5500K±500K)

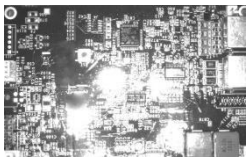


Example: EFFI-SRING-RWRW-WW is an EFFI-SRING with the 1st and the 3rd channels in red and the 2nd and the 4th channels in white.

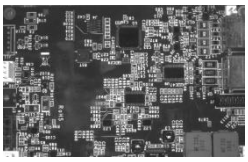
WW: Windows (if not specified, default opaline window)

TR	SD	OP
Transparent	Semi-Diffusive	Opaline

Option Polarizer



Without polarizer



With polarizer

Put the polarizer under the transparent window of the EFFI-SRing.
If polarizer, add **-POL** in the part number. Possibility to buy only the accessory.
Part number: EFFI-SRING- XXX-ZZZZ-TR-**POL**

Option Diffuse film + Polarizer

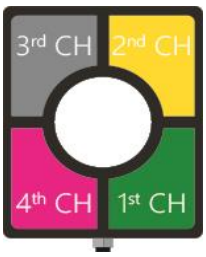
For a diffused and polarized light, the two accessories diffusive film and polarizer can be used. Put the diffusive film under the polarizer (and the polarizer under the transparent window). If polarizer and diffuse film, add **-DIF-POL** in the part number. Possibility to buy only the accessories.
Part number: EFFI-SRING-XXX-ZZZZ-TR-**DIF-POL**

Option Continuous Version

In this version, the EFFI-SRing / EFFI-SDome directly turns on at continuous intensity instead of the high power autostrobe, please refer to page 7.
Add **-CW** in the part number.
Part number: EFFI-SRING-XXX-ZZZZ-WW-**CW**

Part Number – EFFI-SDOME

EFFI-SDOME				
EFFI-SDOME-100-ZZZZ				
100: Size (mm) (Diameter of the LED ring)				
ZZZZ: Colors / Wavelength (nm)				
• B: Blue 465nm	• G: Green 525nm	• R: Red 625nm	• IR: Infrared 850nm	○ W: White (5500K±500K)



Option Continuous Version

In this version, the EFFI-SRing / EFFI-SDome directly turns on at continuous intensity instead of the high power autostrobe, please refer to page 7.
Add **-CW** in the part number.
Part number: EFFI-SDOME-XXX-ZZZZ-**CW**

Option Filter Thread - M25.5

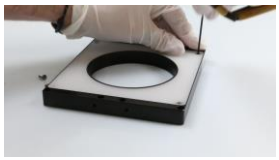
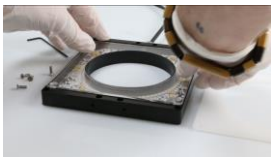
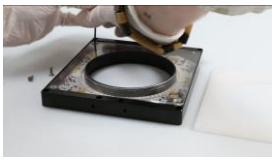
For dome with a filter thread of M25.5 on the camera hole, add **-M25.5** in the part number.
Part number: EFFI-SDOME-XXX-ZZZZ-**M25.5**

Part Number – Accessories

Type	Description	Part Number
Windows	Transparent Window	EFFO-SRING-TR-100
	Semi-Diffusive Window	EFFO-SRING-SD-100
	Opaline Window	EFFO-SRING-OP-100
Polarizer	To polarize the light from EFFI-SRing. To be used with the transparent window	EFFO-SRING-POL-100
Diffusive Film	To transform the EFFI-SRing into a polarized diffusive light. To be used with the polarizer and the transparent window. (Always put the diffusive film under the polarizer)	EFFO-SRING-DIF-100
Camera Hole + Window	Accessory needed to transform an EFFI-SDOME into and EFFI-SRING	EFFO-SRING-COL-100
Dome	To transform the EFFI-SRing into an EFFI-SDome. Standard version	EFFO-SDOME-DOME-100
	Version with filter thread of M25.5to add a camera filter on top of the dome	EFFO-SDOME-DOME-100-M25.5

Change the window - EFFI-SRing

Before opening the product, please disconnect it from your power supply.

			
Unscrew the 4x M3 screws.	Remove the window.	Add the new window. (If you want to add an accessory, put it under the TR window)	Screw the 4x M3 screws.

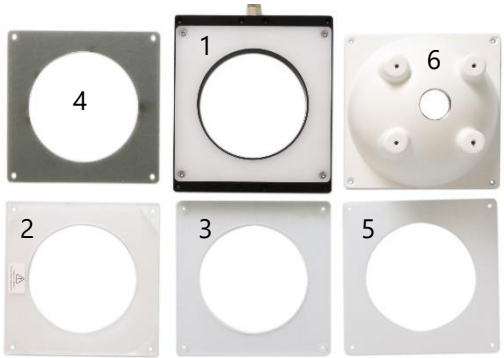
From EFFI-SRING to EFFI-SDOME

Before opening the product, please disconnect it from your power supply.

			
Unscrew the 4x M3 screws and remove the window	Remove the {camera hole + window} accessory (EFFO-SRING-COL-100)	Add the dome and screw the 4x M3 screws.	Optional: Add the camera fixing accessory on top of the EFFO-SDOME. (To be purchase separately)

EFFI-SRING-SDOME-KIT

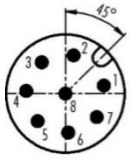
CONTENT OF THE EFFI-SRING-SDOME-100-ZZZZ-KIT		
Description	**Number**	**Part Number**
Product	1	EFFI-SRING-100-ZZZZ-OP EFFO-SRING-COL-100 and EFFO-SRING-OP-100 are already included in this product.
Transparent Window	2	EFFO-SRING-TR-100
Semi-Diffusive Window	3	EFFO-SRING-SD-100
Polarizer	4	EFFO-SRING-POL-100
Diffusive Film	5	EFFO-SRING-DIF-100
Dome	6	EFFO-SDOME-DOME-100

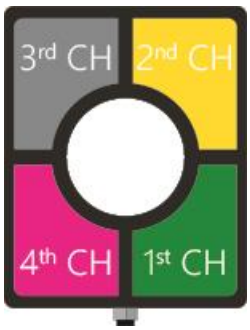


Electronical considerations

Contact arrangement

The EFFI-SRing / EFFI-SDome requires 24V DC input power via a M12 – 8 pins male connector. Note 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.

Contact arrangement	Number	Color Contact	Designation
 *M12 8 pins Male connector*	*1*	White	Mode selection(2)
	2	Brown	+24V – 2.2A max
	3	Green	TRIG (1) n°1
	4	Yellow	TRIG (1) n°2
	5	Grey	TRIG (1) n°3
	6	Pink	TRIG (1) n°4
	7	Blue	GND
	8	Red	N/A



Cable length: 500mm

(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

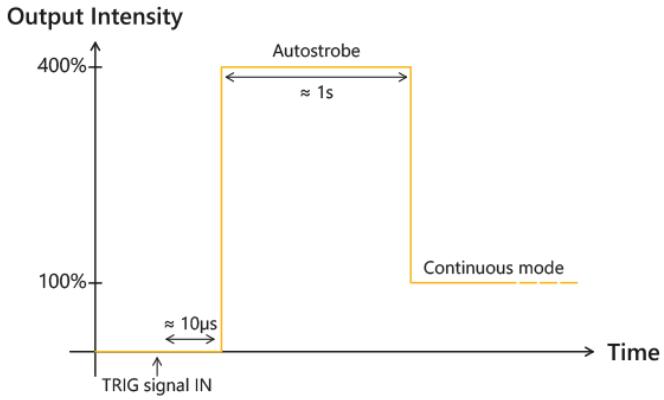
Power consumption

White Version	Red, Green, Blue or Infrared Version
15W max per channel	10W max per channel

Signal consumption

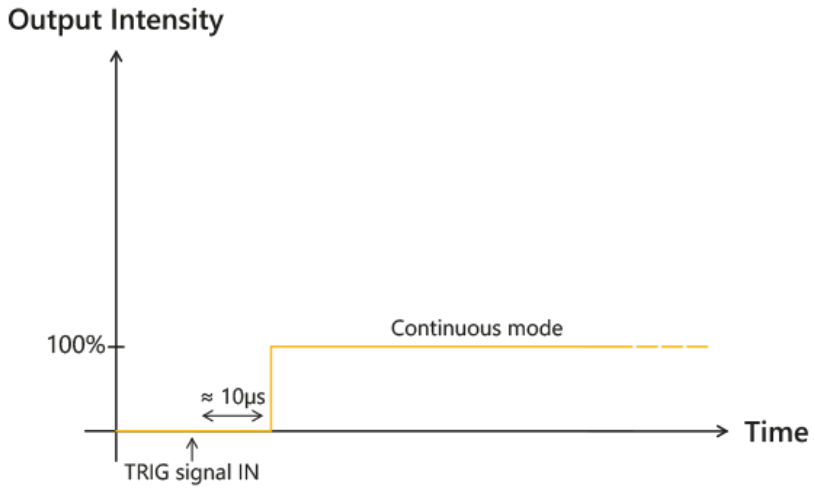
Mode selection consumption (pin 1)	TRIG consumption (pins 3, 4, 5 and 6)
0.5mA max	0,1mA max on each pin

Auto-Strobe



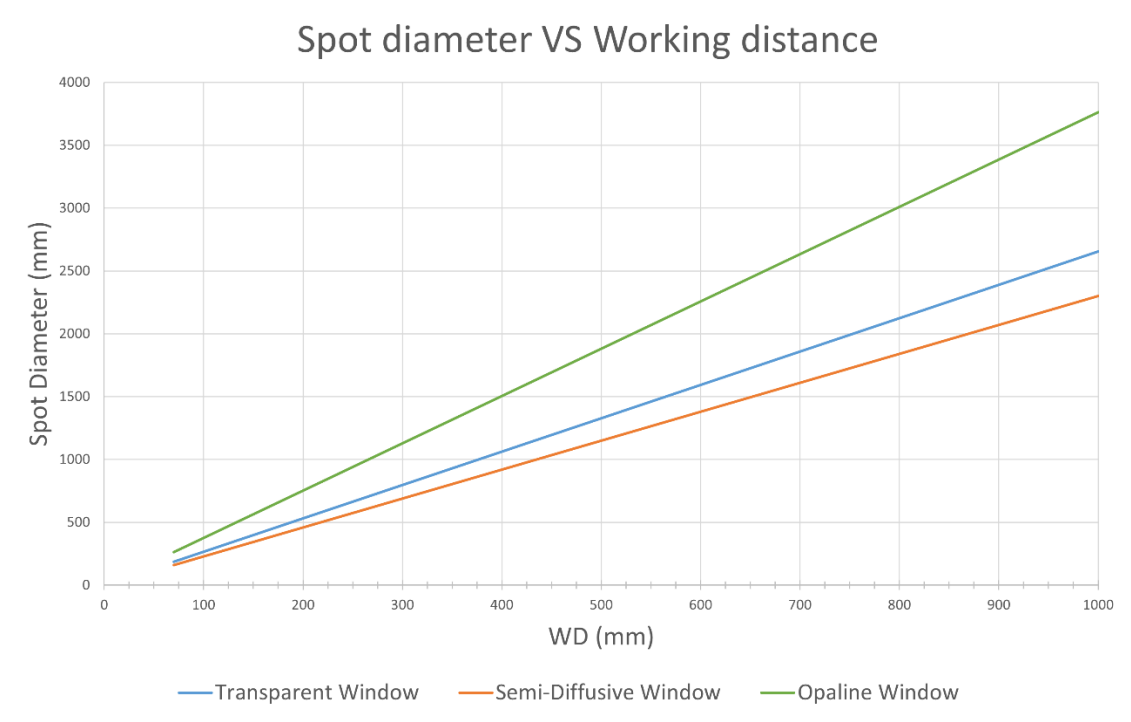
Please respect a duty cycle of 25% maximum. *Duty Cycle* = $(T_{ON} / (T_{ON} + T_{OFF}))$

Option: Continuous Version



Optical Performances of the EFFI-SRING

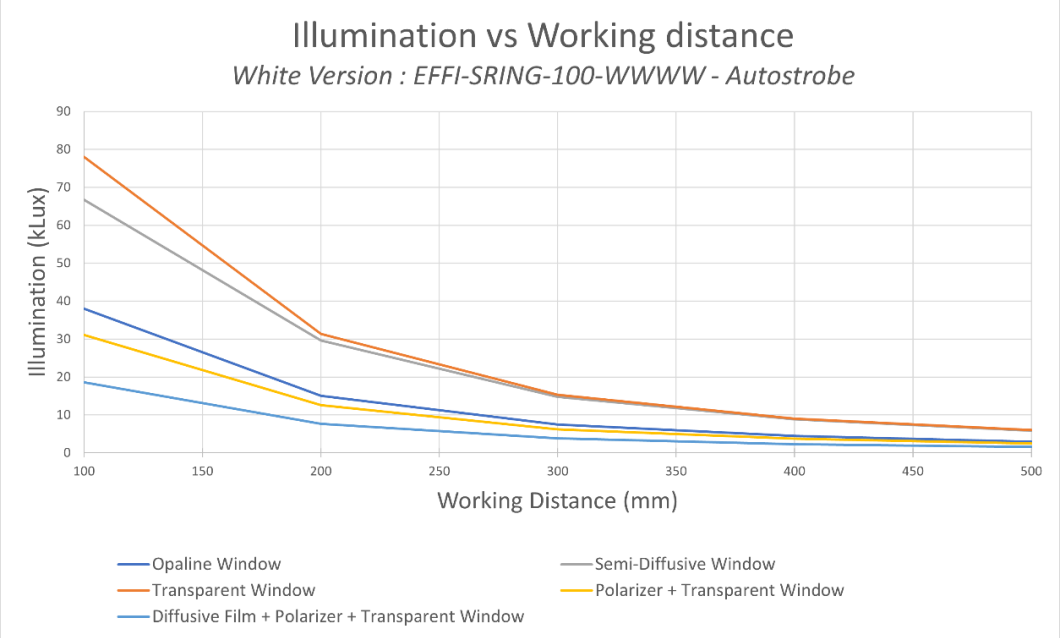
Illuminated spot diameter(1) VS Working distance

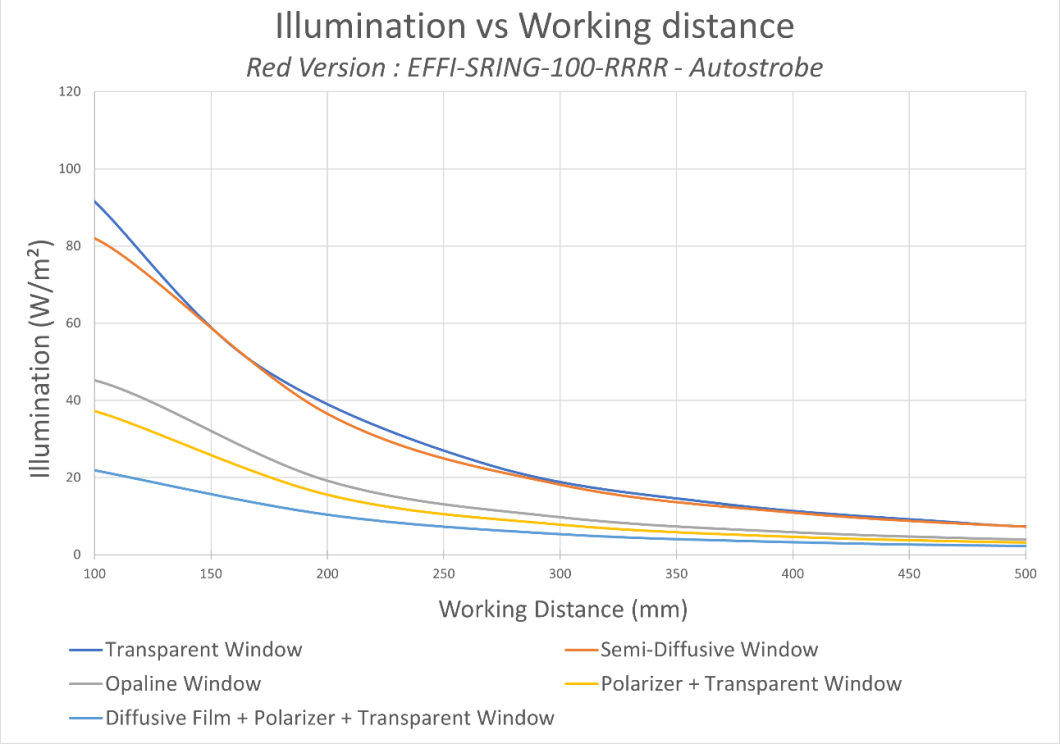


(1) From 50% to 100% of the peak value of illumination

Illumination VS Working distance

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

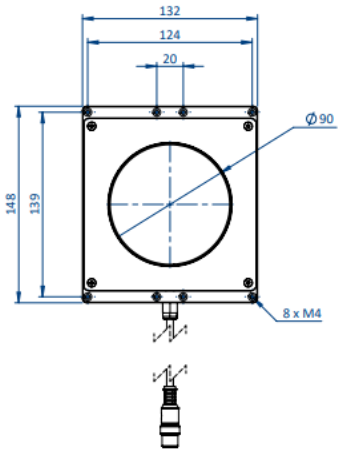


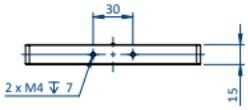


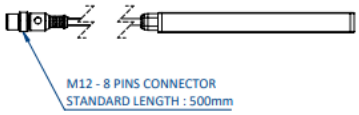
Color	INFRARED (850nm)	RED (625nm)	GREEN (525nm)	BLUE (465nm)
Power factor between the different wavelength	X2.3	X2	X1	X1.1

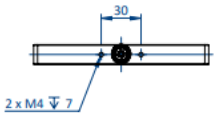
Mechanical considerations

EFFI-SRing configuration









EFFI-SDome configuration