



Uniform

Built-in driver

**Ajustable
beam angle**

Compatible



IP65



effiRING

Adjustable Beam Power Ring Light

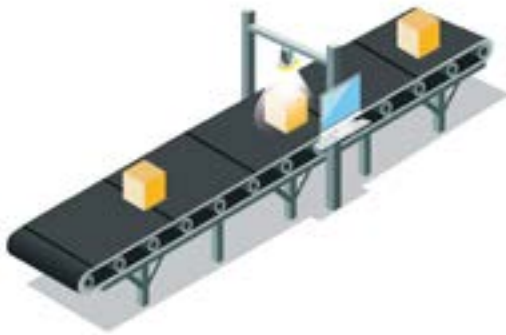
INTRODUCTION

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APPLICATIONS

Quality control



Pick and Place



PART NUMBERING

STANDARD VERSION

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

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.
- The camera can then analyze the part, without being disturbed by the glow effects.

Multispectral version

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

- If RGB (red, green, blue): add -RGB at the part numbering .
- If WUI (white, UV, IR): add -WUI at the part numbering.
- 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



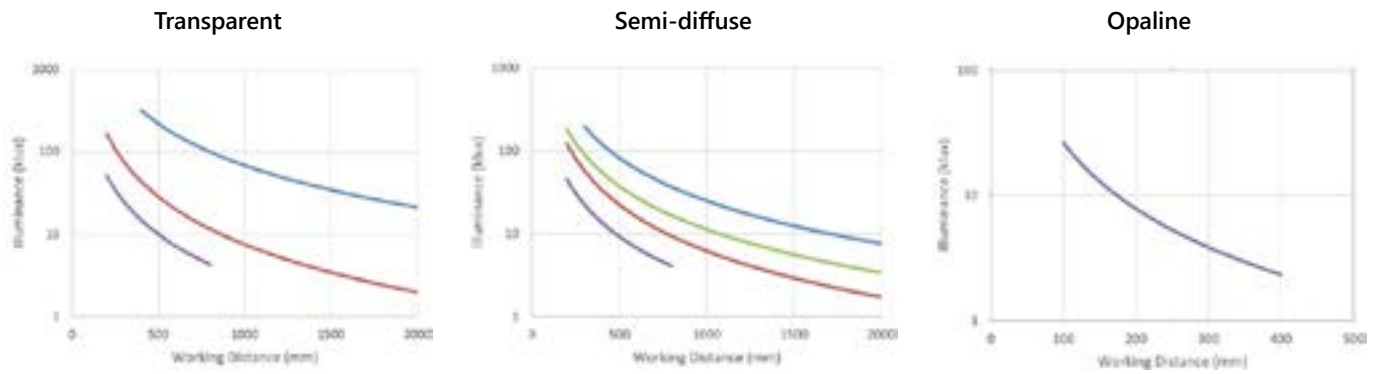
Illumination Mode	Continuous or strobe	
Wavelengths	365nm, 405nm, 465nm, 525nm, 625nm, 850nm, White (5500K ±500K)	
Power Supply	24V DC	Direct current
Connector(s)	M12 - 5 pins	M8 - 4 pins
Power Consumption	72W	Depends on your configuration
Weight	400 g	
Dimensions	117mm x 151mm x 40mm	
Clear aperture	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

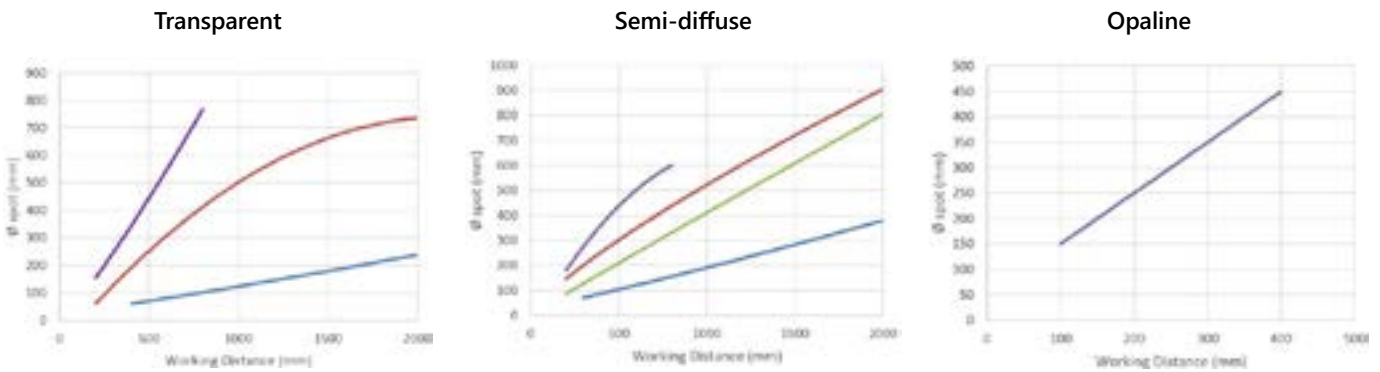
LENS POSITION



Illumination vs working distance :



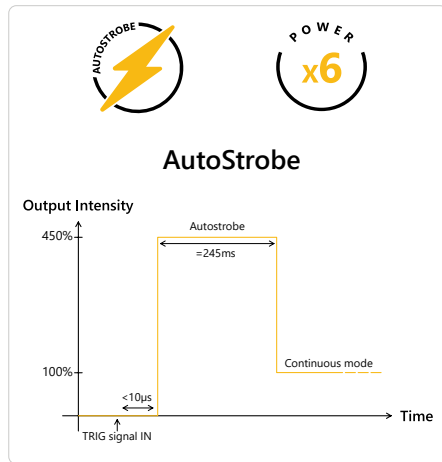
Ø Spot vs working distance :



ELECTRONICAL SPECIFICATIONS

OVERVIEW

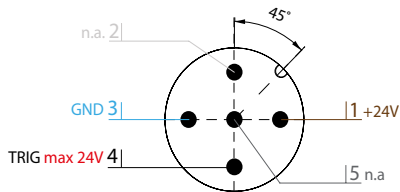
The EFFI-RING has been designed to have several electronical modes available in the same product. Additionnally to that, our engineers have developed a strong AutoStrobe mode to boost the injected current up to 1000% of the continuous mode current value.



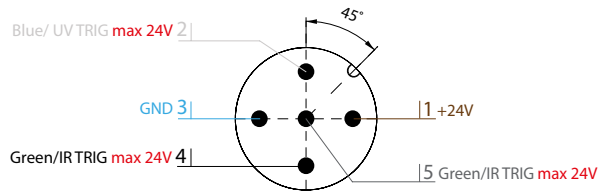
CONTACT ARRANGEMENT

M12 connector - Smart control (Strobe)

Designation Monochrome version

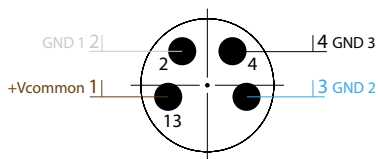


Designation RGB/WUI version

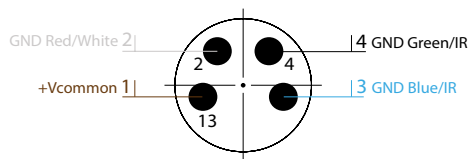


M8 connector - direct LED control (expert mode)

Designation Monochrome version



Designation RGB/WUI version

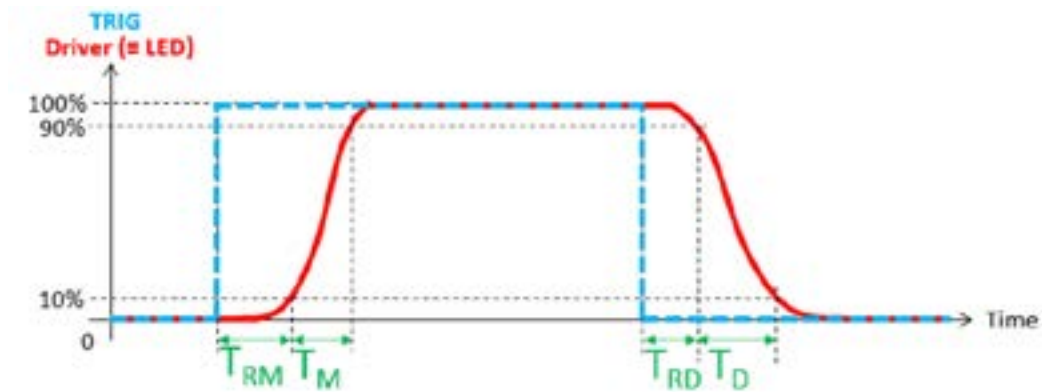


M8 STR configuration

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

	F (Hz)				
T pulse (μs)	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

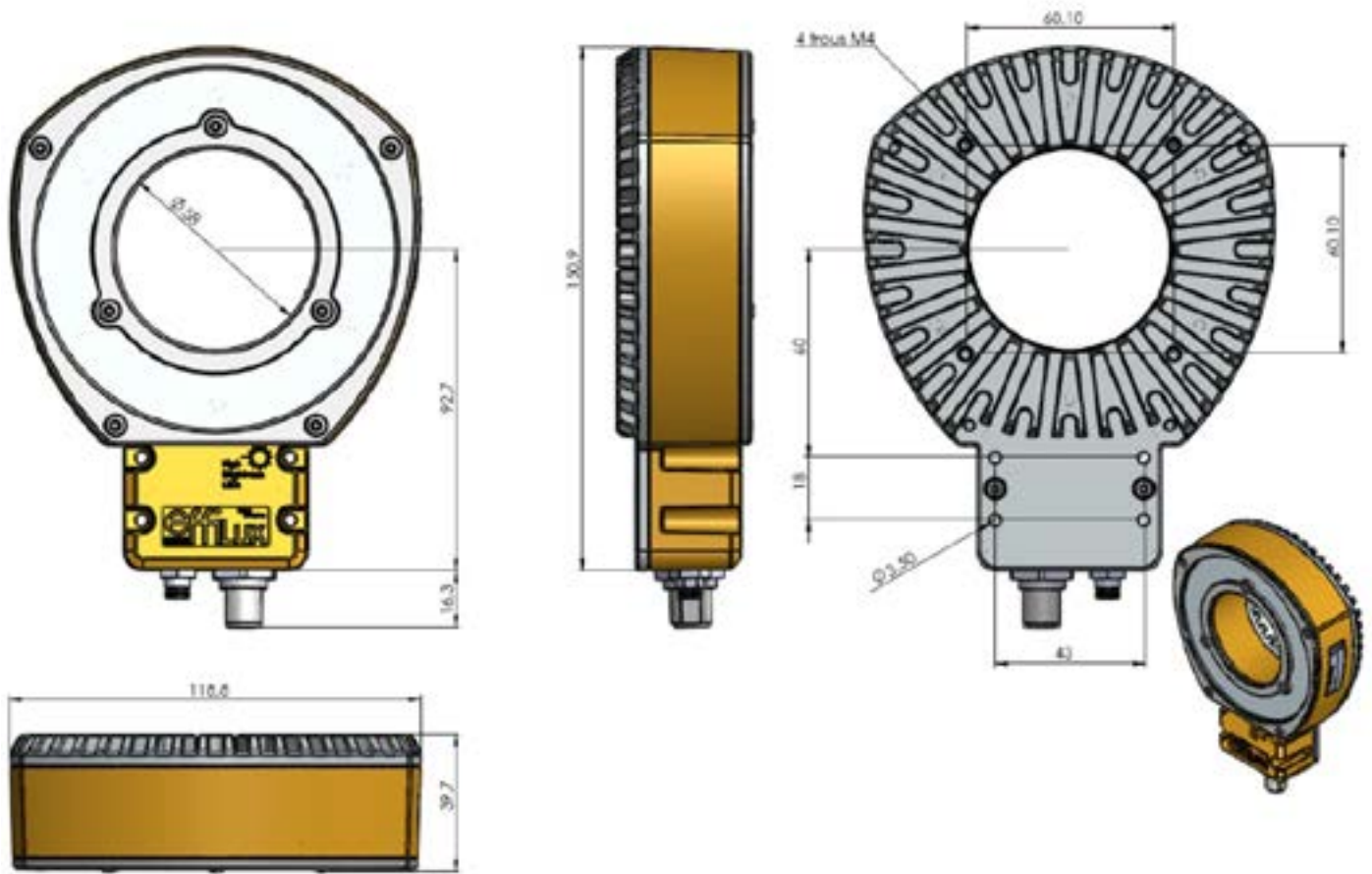
Notes:

- (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.

T_M increases when UTRIG or/and the frequency increases.

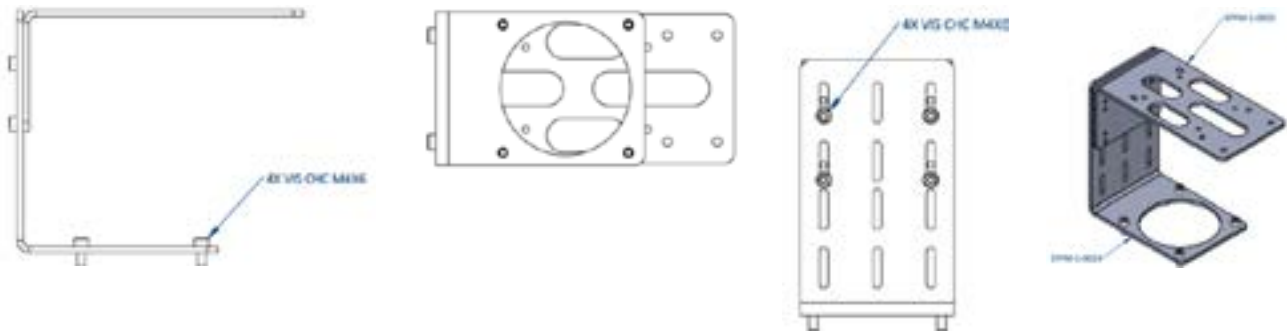
(*) **Note:** For the STR option, there is no reponse time value to consider.

MECHANICAL SPECIFICATIONS (DIMENSIONS IN MM)

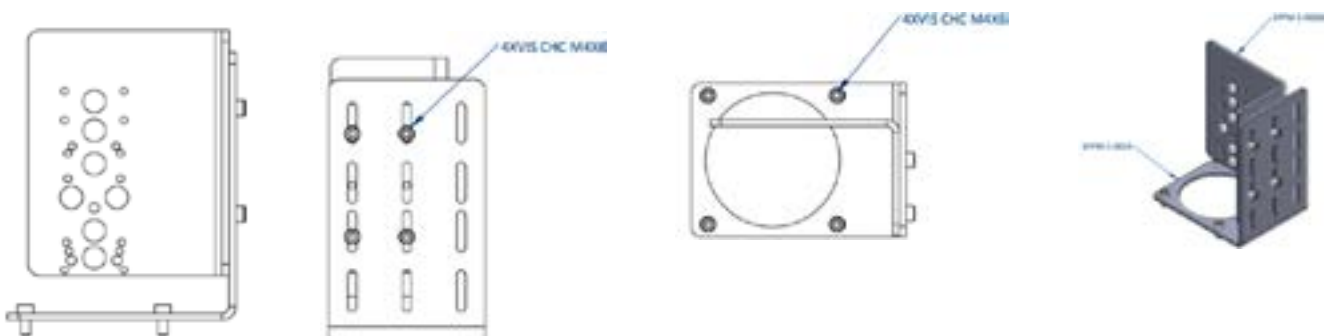


Combinations between camera supports

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



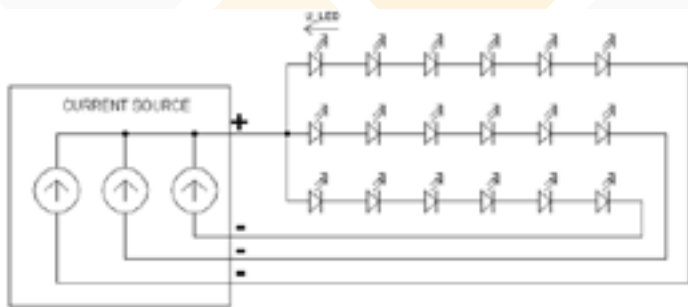
EFFM-1-VERT : EFFM-1-0024 + EFFM-1-0026



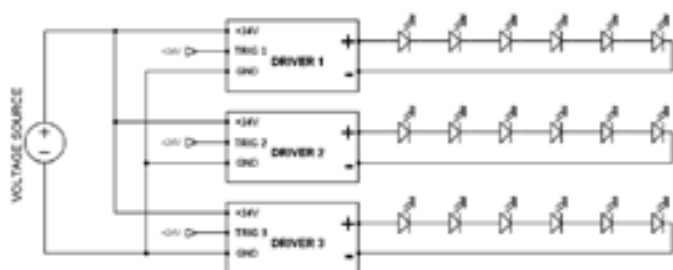
ANNEX

M8 connector block circuit diagram

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 block circuit diagram



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

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 December-2022 and may be changed without prior notice.



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