



**Please take a while to consider and read this brochure before using your new device.
If you have any doubt, please refer to the datasheet on the website or contact EFFILUX.**



User security

- Do not look directly or with any optical instrument the light beam
- Avoid any contact with the LED or with the projection lens
- IP65 Classification: Do not immerse the device in water or any other liquids
- Operating environment: 0 to 40°C - Humidity: 20 to 85RH% (without condensation)
- High humidity and high temperature could damage the device
- Do not use the device in an environment with oil fumes and steam
- Do never try to fix any damages to the product by yourself
- Make sure you are using a correct power supply before connecting the device
- The device must be powered by a 24V safety power supply in accordance to local Electrical Safety rules
- Do not inverse electrical polarity – check the conventions before turning on the power supply
- Make sure you consider an adapted connector to link the device to the power supply

Any improper use voids the warranty



Reference

EFFI-RING

-HSI

Wavelength (nm)
Hyperspectral Visible-NIR

-YY

Windows
TR (Transparent)
SD (Semi-diffusive)
OP (Opaline)

-ZZ

Lens position
P0 (no lens)
P1 (45°)
P2 (25°)
P3 (10°)

-...

Option
POL (polarizer)
-POL-IP (polarizer glued for IP version)
STR (driving control)

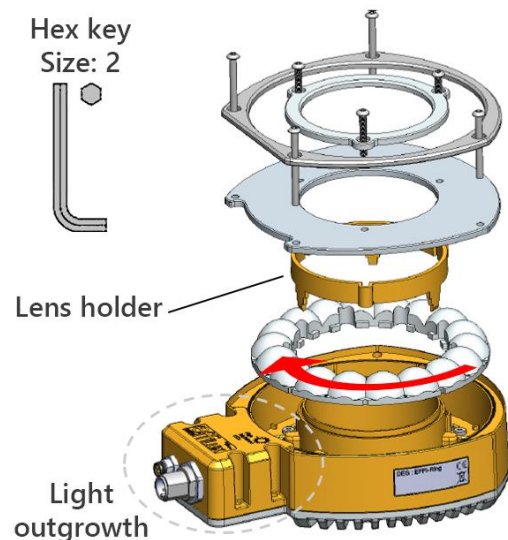
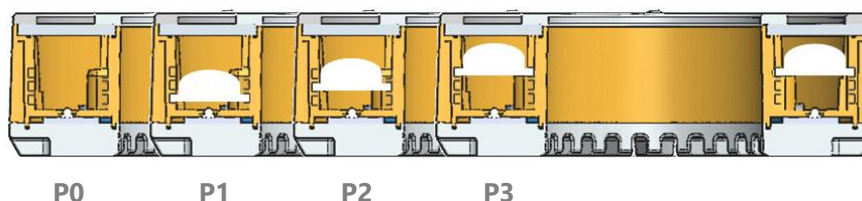
Please note that with the polarizer accessory, the EFFI-Ring is IP50. For IP65 polarized version, choose -POL-IP option.



Maintenance

During any maintenance operation, the product must be switched off.

HOW TO CHANGE THE OPTICAL CONFIGURATION



Numbers 1, 2 and 3 are inscribed **on the edge of the lens plate** and correspond to the lens position.

Rotate the lens to align the number of the desired position with the outgrowth of the light.

- 1) Unscrew the M2 screws and separate all parts.
- 2) Align the lens plate to the desired position and place into the light.
- 3) Place the lens holder, then the desired diffuser.
- 4) Close the product.



Example: Lens position P3

To handle the optical components, wearing gloves is strongly recommended.

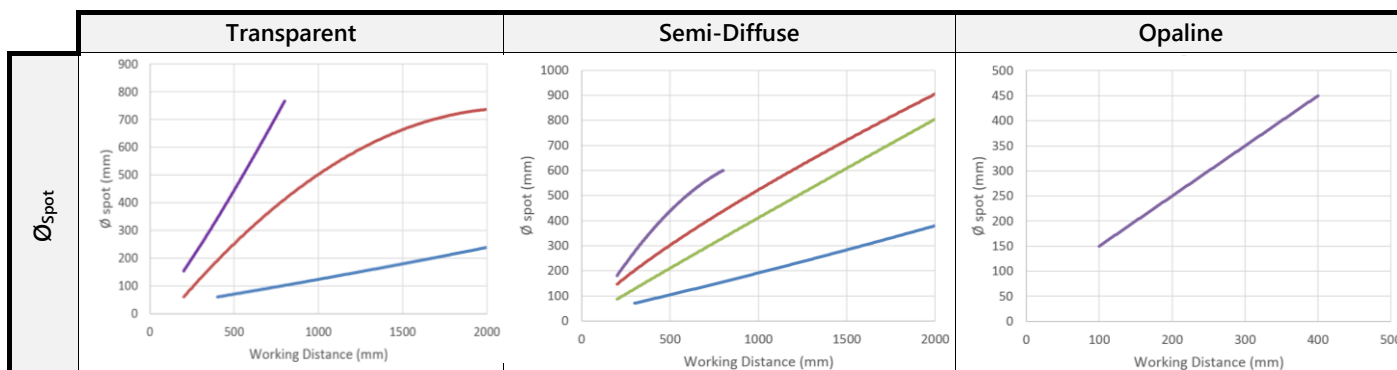
To clean the optical components: Use compressed air duster if there is dust.

To remove marks on the lens or the window, just a drop or two wiped of alcohol-based lens cleaning fluid in a gentle circular motion with a cleaning tissue. Always apply the fluid to a tissue rather than the lens itself.

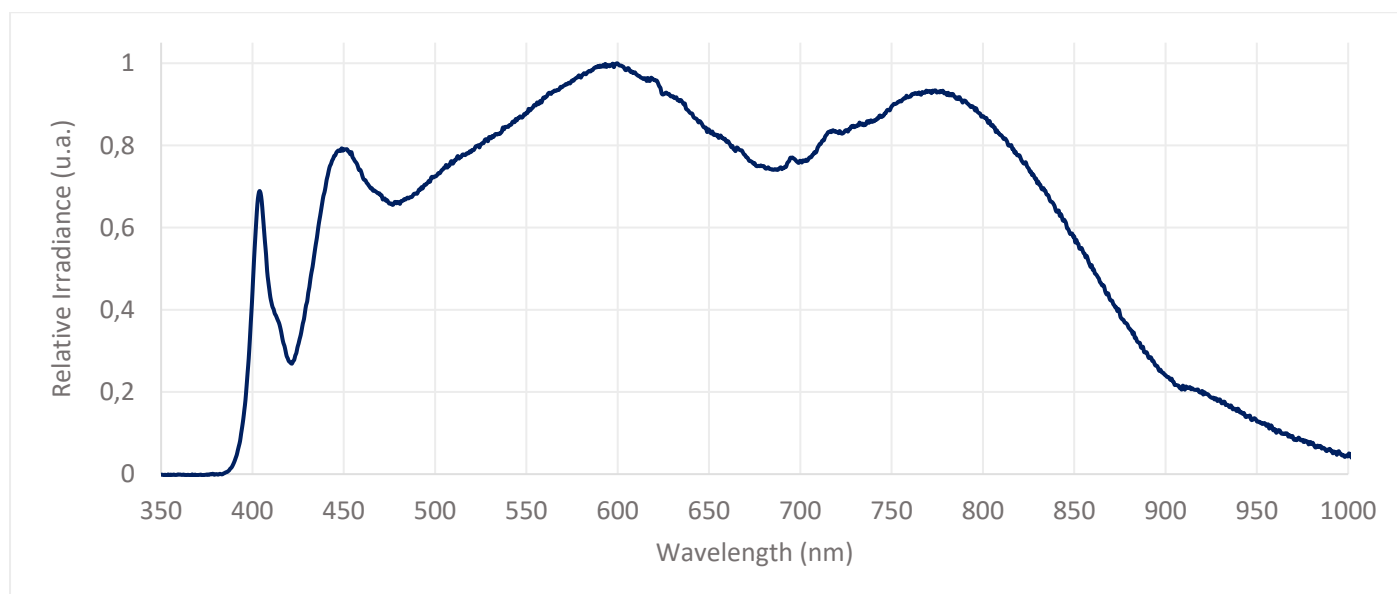


Optical considerations

SPOT DIAMETER VS WORKING DISTANCE



SPECTRUM



Measurements done on EFFI-RING-HSI-SD-P2, at 10mm working distance, after 30min of use.



Electronical considerations

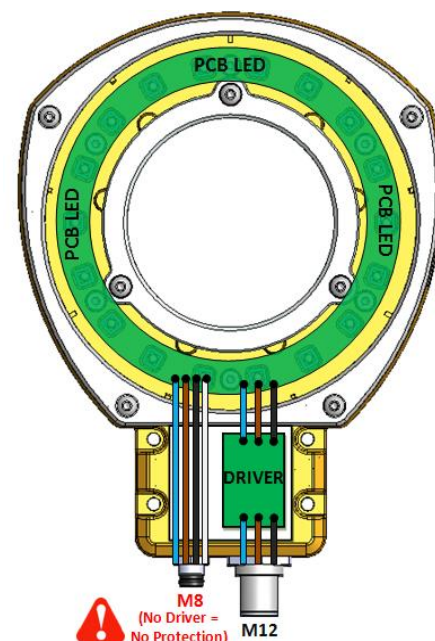
POWER CONSUMPTION = 10W

CONTACT ARRANGEMENT

The EFFI-Ring 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 Strobe mode.

M12 connector – Smart control (Continuous or Strobe)			
Contact arrangement	Number	Color Contact	Designation
 M12 Male connector	1	Brown	+24V
	2	White	n.a.
	3	Blue	GND
	4	Black	PNP TRIGGER – max 24V Light on if $V_{PNP} > 5V$ DC
	5	Grey	n.a.

M8 connector – Direct control (expert mode)			
Contact arrangement	Number	Color Contact	Designation
 M8 Male connector	1	Brown	+V _{common}
	2	White	GND 1
	3	Blue	GND 2
	4	Black	GND 3

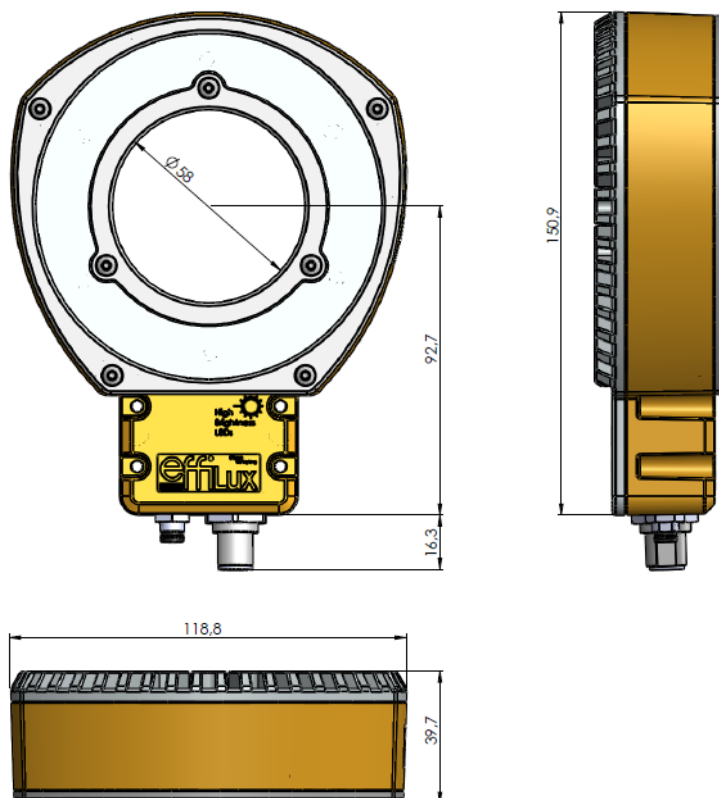


CHARACTERISTICS OF THE PULSE - M12 CONNECTOR		<table><tr><th>Designation</th><th>Time (μs)</th></tr><tr><td>Rise time (T_{RM})^{1,5}</td><td>4-15</td></tr><tr><td>Response rise time (T_{RM})²</td><td>25</td></tr><tr><td>Fall time (T_D)³</td><td>10</td></tr><tr><td>Response fall time (T_{RD})⁴</td><td>5</td></tr></table>	Designation	Time (μs)	Rise time (T _{RM}) ^{1,5}	4-15	Response rise time (T _{RM}) ²	25	Fall time (T _D) ³	10	Response fall time (T _{RD}) ⁴	5		
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CHARACTERISTICS OF THE PULSE - M8 CONNECTOR	500mA max per channel @30% Duty Cycle Be aware that the maximum current cannot be exceeded.													



Mechanical consideration

DIMENSIONS [in mm]



FIXING [in mm]

