

LGHT-R

High-power adjustable LED ring light



KIT Version: Delivered with three diffusers included as a package

Very intense and **uniform** illuminated area

Full range of colors

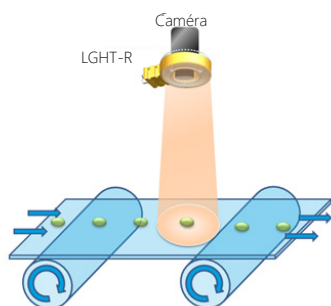
Long lifetime and minimal maintenance

Compatible with most **lenses**

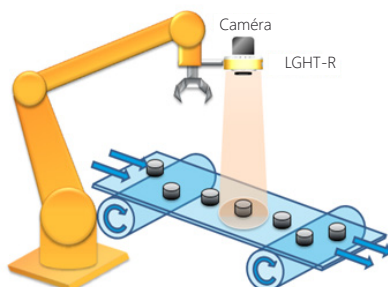
Flexibility: 4 adjustable illumination angles & 3 different window options

TYPICAL APPLICATION

QUALITY CONTROL



PICK AND PLACE



TECHNICAL SPECIFICATIONS

Illumination Mode	High-power Strobe or Continuous mode	
Wavelengths	465nm, 625nm, 850nm (+/- 5%) White (5500K ±500K)	
	CLASSIC MODE	EXPERT MODE
Power Supply	24V DC +/- 10%	Direct Current
Max Power Consumption	70W	Depends on the current
Connector	M12 - 5pins	M8 - 4pins
Driver version	Autostrobe (not dimmable)	No driver (no protection)
Response Time	Rising: 30µs / Falling: 15µs	x
Duty cycle	Max. 15% in strobe mode No restriction in continuous mode (Duty cycle = 100%)	Cf. page 4
Input signal	PNP trigger input: Light ON: from 5 to 24V Max. signal consumption: 0.8mA @24V	Cf. page 4
Weight	400g	
Dimensions	119mmx 151mmx 41mm	
Material	Device body: Aluminium allow & ABS / Window: PMMA	
Fastener	4x threaded holes for M4 screws; 4x through-holes (ø 3.5mm) on the outgrowth	
IP rating	IP65 <i>For extended use with water please ensure to use a plastic cap on the unused connector (M8 or M12)</i>	
Working temperature	0°C to 40°C	
Storage temperature	-20°C to 60°C	
Regulations	CE - RoHS - REACH - WEEE - IEC 62471	

PART NUMBER KEY

LGHT-R	100	CC	-XX	YY	ZZ
Type	Size	Color	Detail	Rev	Custom
R = Ring light	100 = 100mm	<div>● RD (Red 625nm)</div> <div>● BL (Blue 465nm)</div> <div>○ WH (White 5500K)</div> <div>● IR (Infrared 850nm)</div>	00 = NA	0	0

Example: LGHT-R100RD-0000 = Red Ring light

Note: The product is delivered **as a package** including: **Transparent, Semi-diffusive** and **Opaline windows, lens plate**, and the light. The light is delivered assembled in the default configuration with the lens plate positioned in Position 2 (45°) and the Semi-diffusive window.

ACCESSORIES

OPTICAL ACCESSORIES	
Polarizer	LGHT-A100RP-0000

CABLES (Replace XX by the cable length in meter: 05 / 10)	
M12 Female to Flying leads	LGHT-A000CB-XX00

CAMERA MOUNTING SOLUTIONS	
	LGHT-A000BR-0000

OPTICAL FLEXIBILITY

MANY POSSIBLE CONFIGURATIONS IN JUST ONE LIGHT

Window

The LGHT-R KIT Series is shipped with three different diffusers. Depending on the uniformity necessary for the application, the user can easily change the diffuser to one that fulfills the application requirements.

TR : Transparent



SD : Semi-diffusive

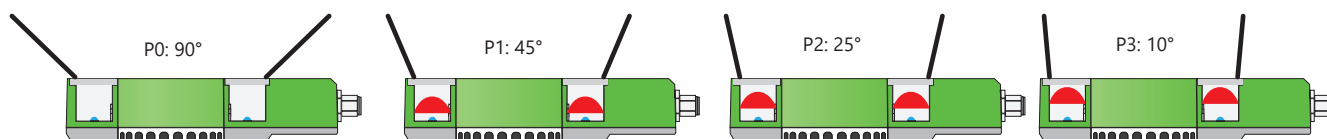


OP : Opaline

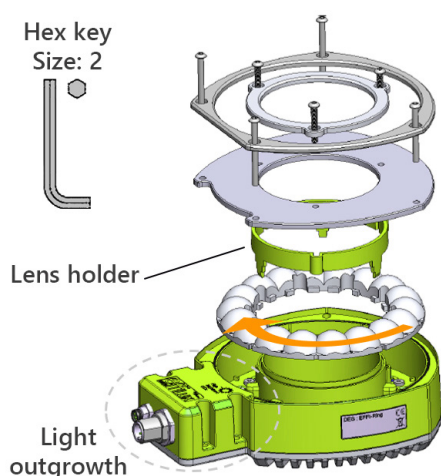


Lens position

The LGHT-R 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.



HOW TO CHANGE THE CONFIGURATION OF THE LGHT-R

Hex key
Size: 2

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.

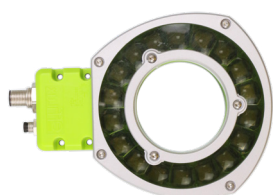


Example: Lens position P3

WAVELENGTH COMPARISON

Wavelength Impact					
Wavelength	White (000)	Green (525nm)	Red (625nm)	Infrared (850nm)	Blue (465nm)
Optical power ratio Working distance = 100mm	1	0.15	1.3	1.6	2.8

OPTION: POLARIZER ACCESSORY



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

The user can insert directly the polarizer plate inside the Ring, on top of the window.



Without polarizer



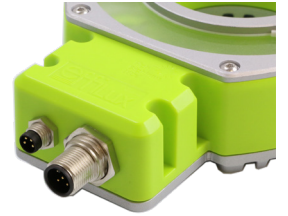
With polarizer

Note: Please note that with the polarizer accessory, the Ring is IP50. For IP65 polarized version, a specific polarizer IP accessory is available (polarizer directly glued on a transparent window).

ELECTRONICAL SPECIFICATIONS

There are two ways to control the LGHT-R:

- **Standard mode - M12 connector:** With the built-in Autostrobe driver (Recommended)
- **Expert mode - M8 connector:** Without driver. Current is supplied directly to the LEDs via an external pulse controller. **Caution:** No driver means no protection, please follow current requirements.

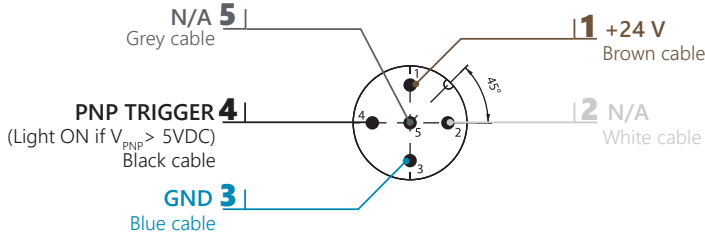


WIRING LAYOUT - STANDARD MODE

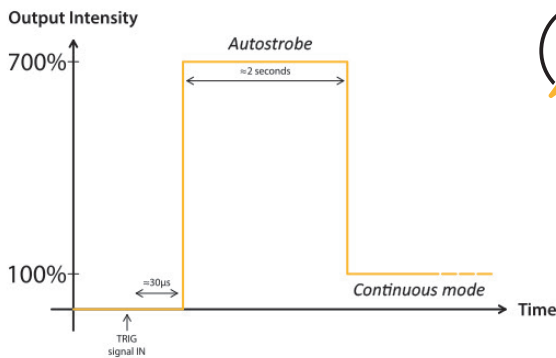
The LGHT-R requires 24V DC input power. Note the **trigger pin needs to be connected** either to the 24V DC signal for Continuous mode or to a PNP Trigger signal for Autostrobe mode. In the tricolor version, the 3 channels are independant.

M12 - 5 pins

male connector



AUTOSTROBE FEATURE



The integrated driver with Autostrobe feature allows for 700% increased intensity while being strobed when compared to continuous mode.

Respect a duty cycle lower than 15% in strobe mode.

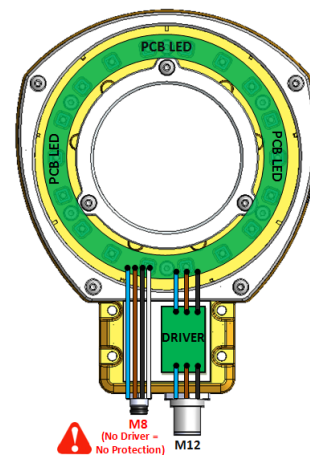
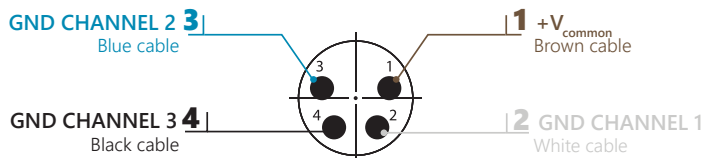
Response time	
Rising time	30μs
Falling time	15μs

M8 CONNECTOR - DIRECT CONTROL (EXPERT MODE)

Wiring layout

M8 - 4 pins

male connector

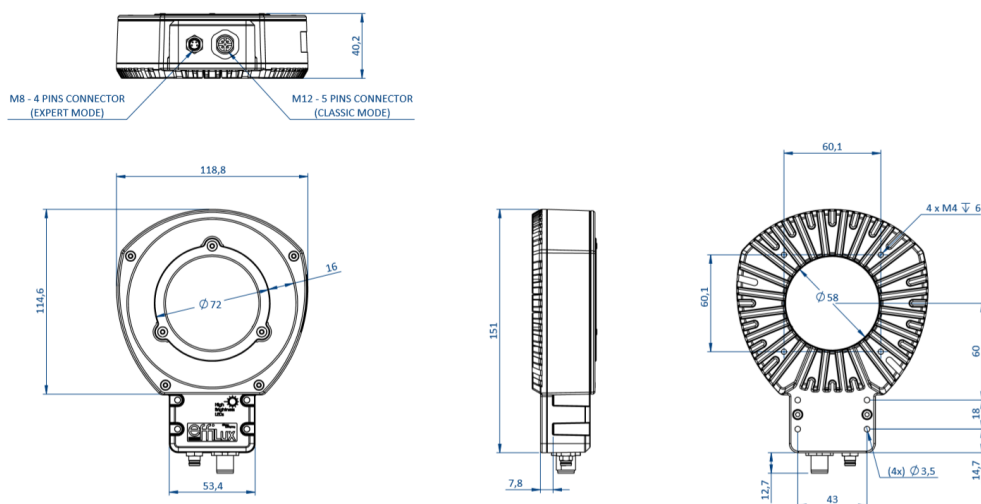


Maximum current

T pulse (μs)	F (Hz)				
	1	5	10	15	20
100 000	1.0A				
50 000	1.2A				
10 000	1.5A		1.0A		
1 000			2.0A		
100			2.5A		

Be aware that the maximum current for a given frequency and a given pulse width cannot be exceeded.

MECHANICAL SPECIFICATIONS

IP65


ACCESSORIES

Please refer to the specific documentations for additional information on the accessories of the Ring.


Polarizer

Diffusers

Camera filters

Mounting solutions

Power supplies

Cables

CUSTOM


RGB Version

SWIR Version

CONTACT INFORMATION

Please refer to the specific documentation (datasheet, user guide, drawing, handling precautions) for complementary information.
Contents of this document are based on information available as of May-2020 and may be changed without prior notice.



EFFILUX
1, Rue de Terre Neuve
Mini Parc du Verger - Bâtiment E
91940 Les Ulis - FRANCE

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

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www.effilux.com