

# USER MANUAL LGHT-R



## GENERAL PRODUCT INFORMATION



Thank you for purchasing an Efflux's product. To ensure proper use of the product, please read this *User manual* before use and keep it for your future reference. Any improper use voids the warranty. This product is an LED light used for machine vision and industrial inspection. Do not use the product for other applications, and be sure to follow the instructions below.

Datasheets and drawings in PDF and/or CAD are available upon request, please contact Efflux.

The label(s) on the product always indicate(s) the reference, the power consumption and the serial number of the product. Be sure to check the content before using the product and handle the label(s) with care. The date of manufacturing is included in the serial number of the product: XXXXXYYMM-ZZZ with YY corresponding to the year and MM to the month. If the label is missing or damaged and the content cannot be checked, please contact Efflux.

## GENERAL WARNINGS AND PRECAUTIONS OF USE

### MAINTENANCE

The product must be switch off during any maintenance operation. To remove marks on the lens or on the window: Use alcohol-free lens cleaning fluid on a cleaning tissue. Few drops will suffice. Please clean gently. Always apply the fluid to a tissue rather than the lens itself. To clean optical components: Please wear gloves and use compressed air if there is dust.

### USAGE AND STORAGE ENVIRONMENT

Operating environment	Temperature: 0 to 40°C - Humidity: 20 to 85RH% (without condensation)
Storage environment	Temperature: -20 to 60°C - Humidity: 20 to 85RH% (without condensation)

Except if a specific IP rating is given for your product (refer to the «Dust and Water resistance (IP rating) » section), please install the product to locations with following conditions (Incorrect installation location may causes product failure) :

Well-ventilated places with minimal dust.	Places free from any liquid, chemical product or steam.
Places free from corrosive or combustible gas.	Places that are not subject to sudden temperature changes.
Places away from water taps, boilers, humidifiers, air conditioners, heaters or stoves.	

### USER SECURITY

Incorrect use of the product may result in fire, electric shock, or other serious damages. Please ensure to follow below conditions. If an abnormal condition occurs (fuming, heat, noises, etc.), stop using the product immediately and turn the power off.

Do not disassemble or modify the product.	Do not look directly at the LED light without protection.
Do not try to fix any damages on the product by yourself.	Make sure special protective glasses are used with UV products (<420nm).
Do not touch the product with wet hands.	Do not use homemade cables.
Wire and keep the flying leads cables in a dry area (regardless of the product's degree of protection).	Make sure the product does not show any moisture or liquid inside before switching it ON.
Make sure the power supply and the cable/connector are adapted to the product specifications.	The device must be powered by a 24V safety power supply in accordance to local Electrical Safety rules
Do not inverse electrical polarity - check your connections and the conventions.	The product packaging must be removed before use.

# PART NUMBER KEY

## STANDARD VERSION


LGHT-R	100	CC	- XX	Y	Z
	Size	Color	Detail	Rev	Custom
Type 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(s)**, and the light. The light is delivered assembled in the default configuration with the lens plate(s) positioned in Position 2 (45°) and the Semi-diffusive window.

## AVAILABLE ACCESSORIES

Please refer to the datasheet for additional information on the accessories of the LGHT-R.

<b>POLARIZER</b>	LGHT-A100RP-0000
<b>CABLES</b> M12 Female to Flying leads	LGHT-A000CB-XX00 (Replace XX by the cable length in meter: 05 / 10)
<b>CAMERA MOUNTING SOLUTIONS</b>	LGHT-A000BR-0000 

# ELECTRICAL INSTALLATION

## POWER SUPPLY

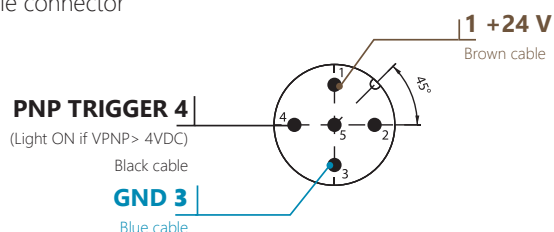
Power supply / Electrical Input	24V DC +/-10%
Connector	M12 - 5pins (M8 connector reserved for internal use only)
Power consumption (Max)	70W
Driver Version	Autostrobe (not dimmable)
Input signal	PNP trigger input: Light ON: from 4 to 24V / Max. signal consumption: 0.8mA @24V

## HOW TO CONNECT THE LGHT-R?

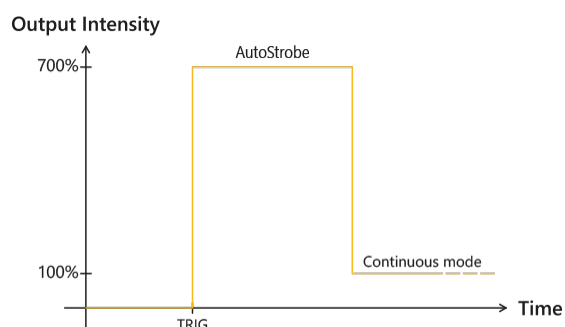
The LGHT-R requires 24V DC input power. Note the trigger pin **needs to be connected** either to the 24V DC signal for Continuous mode or to a PNP Trigger signal for Overdrive strobe mode.

### M12 - 5 pins

male connector



## AUTOSTROBE FEATURE

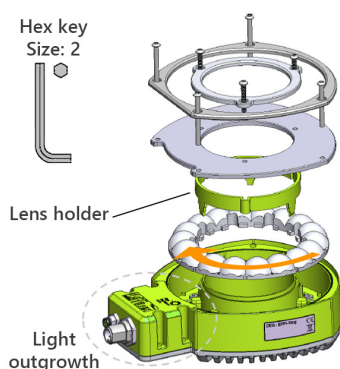


AutoStrobe	
Duty cycle	Max. 15% in strobe mode
Rising time	30µs
Falling time	15µs

## OPTICAL FLEXIBILITY

### HOW TO CHANGE THE OPTICAL CONFIGURATION?

The LGHT-R 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.

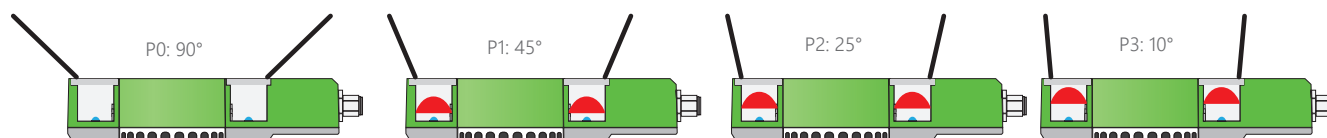


Numbers 1, 2 and 3 are inscribed on the edge of the lens plate and correspond to the lens position. Rotate the lens to align the number of the desired position with the outgrowth of the light.

- 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

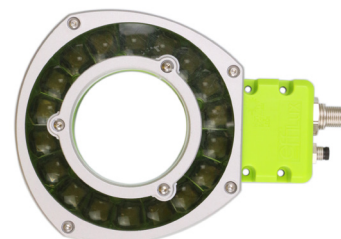


### HOW TO INSTALL A POLARIZER ACCESSORY?

By using polarizers, on the light and on 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 LGHT-A100RP-0000 inside the LGHT-R100, on top of the window.

#### Important 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).



## MECHANICAL CONSIDERATION

IP rating	IP65 <i>For extended use with water please ensure to use a plastic cap on the unused connector (M8)</i>
Dimensions	119mmx 151mmx 41mm
Fixing	4x threaded holes for M4 screws; 4x through-holes (ø 3.5mm) on the outgrowth

## REGULATIONS COMPLIANCY

<b>Regulations &amp; Marking</b>	CE (Safety standard: IEC 62471) - UKCA - KC - BIS: IS 10322 (PART 5/SEC 1):2012 - EAC - RCM - SABS - NRCS - NC-CIR - Serbian mark conformity - FCC - ICES-3/NMB-3
<b>Environmental Standards</b>	RoHS Directives (2011/65/EU, 2015/863/EU and China RoHS) - REACH Regulation - WEEE Regulation
<b>Country of Origin</b>	France - Manufactured by Effilux
<b>Model Number</b>	R100

The FCC mark indicates that it complies with part 15 of the FCC Rules (US FCC Class A (47 CFR § 15.19)). Operation is subject to the following 2 conditions:

- (1) This device may not cause harmful interference,
- (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### CAN ICES-003(A) / NMB-003(A)

This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.


## ENVIRONMENTAL REGULATIONS


### EU RoHS DIRECTIVE

The EU RoHS Directive is short for the «Restriction Of use of certain Hazardous Substances in electrical and electronic equipment». The EU RoHS Directive (2011/65/EU) restricts the use of specific hazardous substances for the new electronic equipment marketed in the EU. The Directive (EU) 2015/863 amending 2011/65/EU was published in 2015 to restrict the use of specific hazardous substances, including six conventional substances, lead (<0.1%), mercury (<0.1%), cadmium (<0.01%), hexavalent chromium (<0.1%), polybrominated biphenyl (PBB) (0.1%) and polybrominated diphenyl ether (PBDE) (<0.1%), as well as four substances (phthalate compounds), bis(2-Ethylhexyl) phthalate (DEHP) (<0.1%), benzyl butyl phthalate (BBP) (<0.1%), dibutyl phthalate (DBP) (<0.1%), diisobutyl phthalate (DIBP) (<0.1%). Our products do not contain the above certain hazardous substances in excess of the maximum permitted concentration. However, this does not apply if the product falls under the exemption.

### CHINA RoHS

China RoHS Directive is formally known as «Management Methods for Restricting Hazardous Substances Used in Electric and Electronic Products», which was implemented on July 1<sup>st</sup>, 2016 in China. Same as EU RoHS Directive (2011/65/EU), this regulation restricts the usage of same six substances. This regulation requires electronic information products which are manufactured or imported, and sold in China, to clearly disclose contents of the 6 restricted substances listed below.

Names and Contents of Hazardous Substances							
Usage Deadline for Environmental Protection	Product name	Names and contents of hazardous substances					
		Lead and its compounds (Pb)	Mercury and its compounds (Hg)	Cadmium and its compounds (Cd)	Hexavalent chromium compounds (Cr(VI))	PBB	PBDE
	LED Light, Control Unit, or Optional product	×	○	×	○	○	○
(This table is made in compliance with SJ/T11364 regulations.) ○ : Indicates that this toxic or hazardous substances contained in all the homogeneous materials for this part, according to GB/T26572 is within the limit requirement. × : Indicates that this toxic or hazardous substance contained in all the homogeneous materials for this part, according to GB/T26572, is over the limit requirement. *Lead and cadmium are exempted in EU RoHS.							
Usage deadline for environmental protection The number used in this logo is based on "Management Methods for Restricting Hazardous Substances Used in Electric and Electronic Products" and related regulations. It shows the product usage duration in years for environmental protection. After finishing a product usage, the product needs to be re-used or discarded appropriately following local law and regulations, complying with safety and usage caution.							

产品中有害物质的名称及含量							
环保 使用期限	产品	有害物质的名称及含量					
		铅及其化 合物 (Pb)	汞及其化 合物 (Hg)	镉及其化 合物 (Cd)	六价铬化合 物 (Cr(VI))	多溴联 苯 (PBB)	多溴二苯 醚 (PBDE)
	LED 照明、 电源或 任选附件	×	○	×	○	○	○
(本表格依据 SJ/T11364 的规定编制。) ○ :表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T26572 标准规定的限量要求以下。 × :表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T26572 标准规定的限量要求。 (注) 铅和镉中的“×”，因欧洲联盟 RoHS 没有限定，故用“○”表示。							
环保使用期限 此标志的数字是根据电器电子产品有害物质限制使用管理办法以及有关标准等，表示该产品的环保使用期限的年数。遵守产品的安全和使用上的注意，在产品使用后采取适当的方法根据各地法律，规定，回收再利用或进行废弃处理。							

## WARRANTY

EFFILUX products come with a warranty of 2 years (one year for radiant quantity), starting from EFFILUX shipping date. Any improper use voids the warranty.

Exceptions: UV products (<420nm): 1-year warranty / Chillers: 1-year warranty / Polarizers are excluded from warranty.

For more information, please refer to the warranty information available on Effilux's website.

## 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 Feb-2022 and may be changed without prior notice.



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