OPT2435 → 2438
OPERATING INSTRUCTIONS

wenglor TPL

INTRODUCTION

This Technical User Guide contains warnings and guidance for correct and safe operation of the product. These instructions must be followed at all times. wenglorTPL will not be held responsible for problems caused by using the product contrary to these instructions and the Warranty will be deemed invalid.

IP40 | +40°C -10°C | 24V ±10%

UNPACKING

This product is packed at the factory using suitable materials for safe transport. To open the package, do not use any cutting blade to avoid damaging the product(s). Please use the delivered accessories if needed. (Do not use any other products or equivalents to replace the delivered accessories).

In the event of damage occurring during shipping, it must be reported to the carrier at time of delivery (including noting the damage in writing on the delivery documents). It is also your responsibility to notify wenglorTPL in writing of the damage within 24 hours of receipt of the package. If these instructions are not followed, wenglorTPL reserves the right not to accept requests for return and exchange of damaged products.

RISK CLASS

The applicable Standard EN-62471 classifies LED Lighting into 4 classes according to their degree of hazard severity. The table below summarises the risks associated with our standard products.

Color	Class	Risk
White WHI, Red 630 nm	0	none
IR 850 nm	1	low

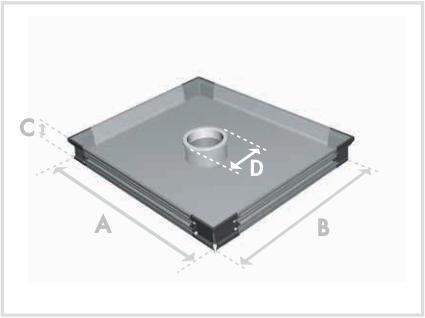
In all cases, wenglorTPL recommends the use of **protection glasses**.

wenglorTPL can provide **guidance notes to minimise photo-biological risks**, including the nominal minimum operating distance. Please contact wenglorTPL through your **usual representative** for this information.

BEWARE to the infrared light, invisible to the eyes.
To know if the light is on, please refer to the LED indicators.

DIMENSIONS

	Dimensions			
	A	B	C	D (int ø)
OPT2435 OPT2436	200	200	55*	65
OPT2437 OPT2438	300	300	55*	65



- **Illumination area:** A x B
- **Total surface:** (A + (4mm x 2)) x (B + (4mm x 2))
  (connector excluded)

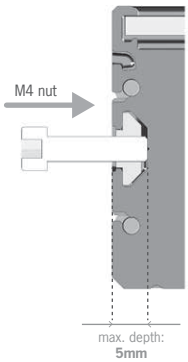
* including 10mm fixing plate.

For additional **sizes** and **colors**, please speak to your responsible sales representative.

FIXING

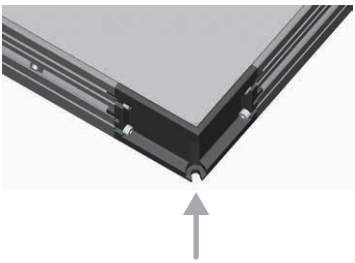
During the set up, the light has to be switched off and unplugged. Please use the fixing groove or holes designed for that purpose. We recommend the using of nuts (supplied) in the groove or M4 screws (not supplied) with a tightening torque from 0.5 to 1.5 Nm. We also recommend the use of a threadlocker (not supplied) to avoid any risk of loosening.

FIXING ON THE LENGTH (groove)



(4 M4 nuts – supplied)

FIXING ON THE CORNER

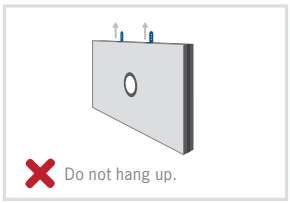


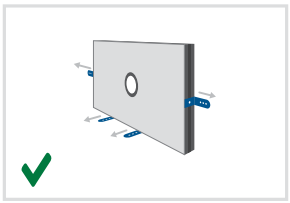
(CHC screw M4x20 – not supplied)

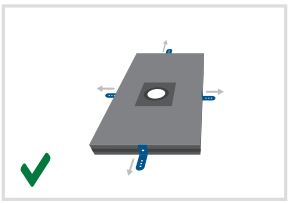
IP40 | +40°C -10°C | 24V ±10%

BE CAREFUL WHEN USING ANGLE BRACKETS.

(Reference: OPT2433)

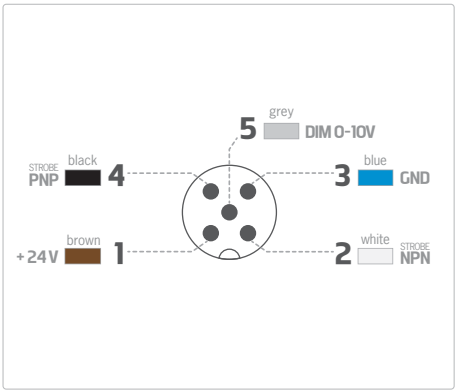






CONNECTION

M12 Connector 5 male points



STROBE **PNP** :

1 +24V
2
3 Ground
4 PNP
5 Dim 0-10V

STROBE **NPN** :

1 +24V
2 NPN
3 Ground
4
5 Dim 0-10V

CONTINUOUS MODE :

1 +24V
2
3 Ground
4 PNP
5 Dim 0-10V

or

1 +24V
2 NPN
3 Ground
4
5 Dim 0-10V

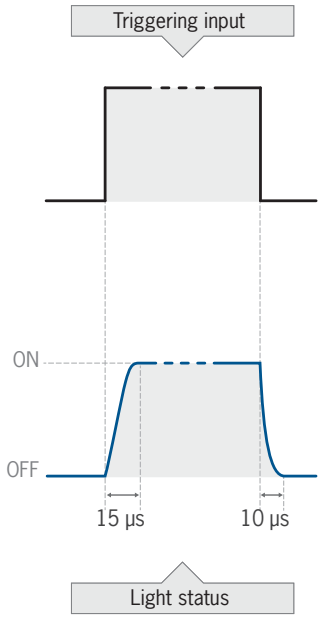
Voltage drop for connector M12 + 10 meter wire: (minimum voltage at product input: 20VDC)	2.2V @ 4A	1.6V @ 3A	1.1V @ 2A	0.55V @ 1A

DIMMING SETTING

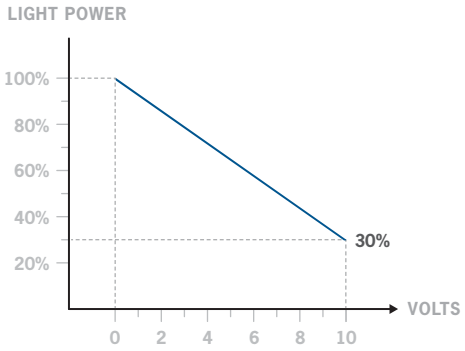
Lowest level: 30% of the power | **Highest level:** 100% of the power.

CONTROL

STROBE MODE



DIMMING 0-10V

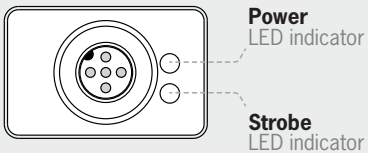


Potential dimming between 0 & 10 V.

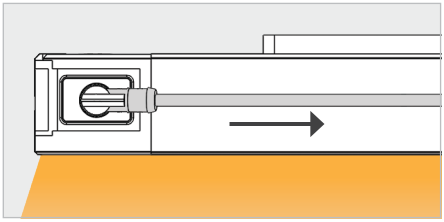
At 0 Volts, the product reaches 100% of its lighting power.

The product is optimised for a lifespan >50kh in a 40°C atmosphere.
In strobe mode, the strobing time is directly equivalent to the time during which the strobe entry is activated.

LED INDICATORS



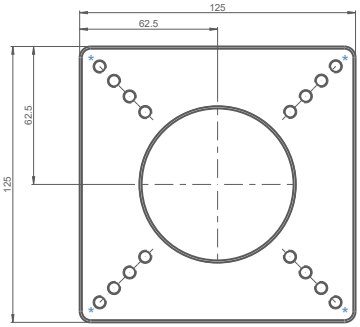
RIGHT ANGLE CABLE DIRECTION

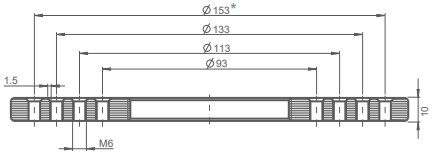


TECHNICAL INFORMATION

Electronics	
Power supply	24 VDC ±10%
Functioning mode	Continuous or strobed
Strobe input	PNP : From 5 to 24V for 100% ON. From 0 to 1V for 100% OFF. NPN : less than 1V for 100% ON. Above 2V for 100% OFF. Max 20V.
Overdrive	No
Strobe conditions (On time, duty cycle)	No restriction
Dimming	Pin 5 (M12 5Pole Connector): 0-10V = 100-30% Respectively
Maximum rising time	15 µs
Maximum falling time	10 µs
Control	Connector M12 5 Poles
Connector pin configuration	1: 24VDC / 2: NPN / 3: GND / 4: PNP / 5: DIM 0-10V
Consumption	• 1.72W per 25cm² (IR) • 1.41W per 25cm² (red) • 1.35W per 25cm² (white)
Min. functioning Voltage	20V in the light input
Normal functioning Voltage	24V in the light input (±10%)
Max. functioning Voltage	30V in the light input
Max. consumption Strobe signal on largest product 300x300mm :	250mA
Max. consumption Dimming signal on largest product 300x300mm :	150mA
Optics	
Colour	White (6500k), Red (630nm) and Infrared (850nm)
Mechanics	
Thickness	45mm
Internal diameter	65mm
Weight	23.8 Kg/m² ±15%
Materials	Aluminum and loaded ABS
Diffuser	White PMMA
Fixing	4 M4 nuts (supplied) to insert in the groove or 4 M4x20 screws (not supplied) applied to the corner slots
Environment	
Operating temperature	-10° C to +40° C / 80% of humidity without condensation No thermal shock (maximum temperature variation: 10 DegC in 24h)
Storage temperature	-20° C to +60° C / 80% of humidity without condensation No thermal shock (maximum temperature variation: 10 DegC in 24h)
IP protection	IP 40
Labels	RoHS-CE-DEEE

CAMERA FIXING





* for assembly, not usable for mounting.

- Length: 125 mm
- Width: 125 mm
- Height: 10 mm
- Screw: M6

USER SECURITY

Please respect the power supply voltages and the connection terminals.
Do not modify or dismantle all or part of the product.
Do not connect or clean when power is on.
Do not watch the lighting source directly, and follow the advice below :

- If the workstation enables it, interpose a filter that will stop the lighting radiation under fixed or adjustable frame between the source and the operator.
- When these measures cannot be implemented, supply the operators with glasses (class 4).
- Forbid or limit the direct access to the lighting source (exposure into the radiation axis).
- Establish a security perimeter so as to prevent the operators from approaching the lighting source beyond the recommendations of the manufacturer, where eye irritation is concerned.
- Ensure that the chosen means properly reduce the exposure level (e.g. features of screens or glasses to be chosen, according to the wavelengths that the operators are exposed to).

EQUIPMENT MAINTENANCE

CLEANING (when the product is switched off)

Please use a soft and dry cloth. Do not use any abrasive material.
Do not use any cleaning solvent or aggressive chemical product.
wenglorTPL recommends to use isopropyl alcohol.

OPERATING CONDITIONS

Not for outdoor use.

PRODUCT LIFETIME

LED lifetime can typically be increased using strobe mode where possible. Strobing the light or turning the illumination on and off (using PNP or NPN lines) allows less temperature build up at the LED junction. The junction temperature of the LED is directly correlated with the lifetime of the LED chip. Maximum ambient air temperature = maximum 40°C/104°F.

LEDs naturally lose some intensity over time because of heat. Using the dimming and setting a reference brightness is a method for keeping the brightness level constant over a very long time, especially on brightness critical applications. wenglorTPL products have been integrated in factories since 2006, many of which are still in operation today. LED lifetime and heat management are at the forefront of our design considerations.

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wenglor TPL

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