

LBBxxxx
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.

IP50 +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.

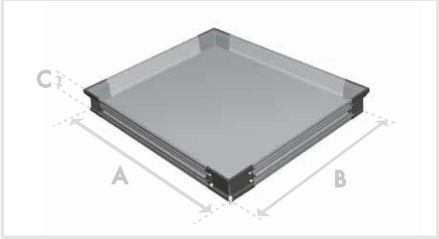
Color	Class	Risk
White WHI, Red 630 nm	0	none
IR 850 nm	1	low

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



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

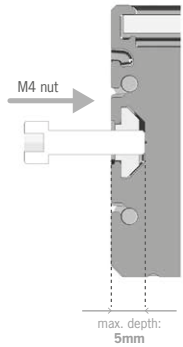
	Dimensions		
	A	B	C
LBBx201	200	200	45
LBBx202	300	200	45
LBBx203	400	200	45
LBBx301	300	300	45
LBBx302	400	300	45
LBBx401	400	400	45
LBBx501	500	500	45
LBBx601 LBBx604	600	600	45
LBBx701	700	700	45
LBBx801	800	800	45
LBBx901	900	900	45
LBBx902	1000	200	45
LBBx904	1000	400	45
LBBx906	1000	600	45
LBBx908	1000	800	45

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

FIXING

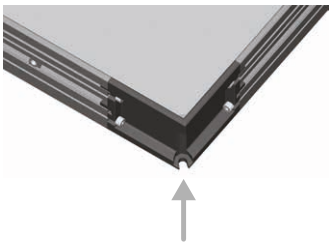
During the set up, the light has to be switched off and unplugged. Please use the fixing groove or holes designed for that purpose. We recommend the using of nuts (supplied) in the groove or M4 screws (not supplied) with a tightening torque from 0.5 to 1.5 Nm. We also recommend the use of a threadlocker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

FIXING ON THE LENGTH (groove)



(4 M4 nuts – supplied)

FIXING ON THE CORNER

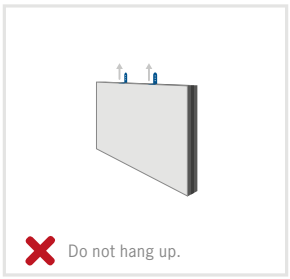


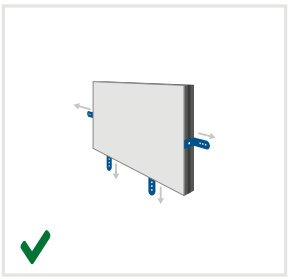
(CHC screw M4x20 – not supplied)

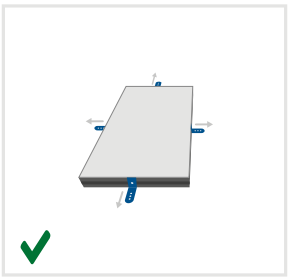
IP50 +40°C -10°C 24V ±10%

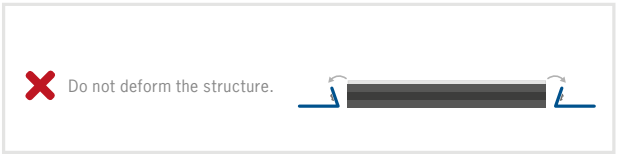
BE CAREFUL WHEN USING ANGLE BRACKETS

(wenglorTPL reference: ZBBX001)

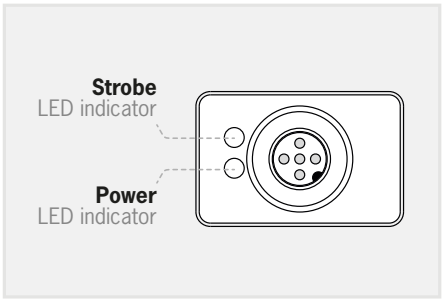




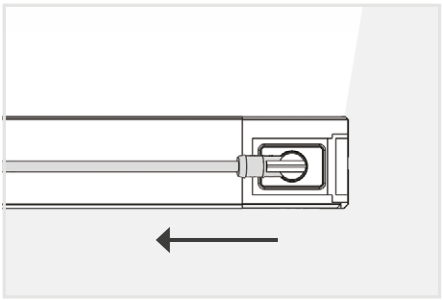




LED INDICATORS



RIGHT ANGLE CABLE DIRECTION



DIMMING SETTING

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

OPERATING CONDITIONS

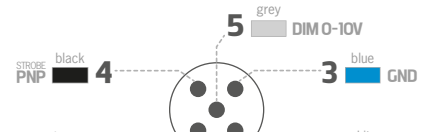
Not for outdoor use.

WIRING

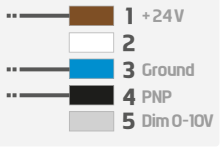
SURFACE ≤ 0.25 m²	SURFACE > 0.25 m²
	
1 M12 connector	**1** M12 connector **+ 1** additional power cable

CONNECTION

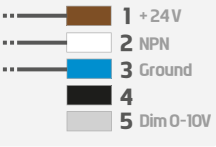
M12 Connector 5 male points



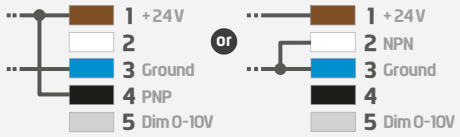
STROBE **PNP** :



STROBE **NPN** :



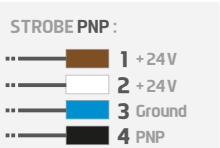
CONTINUOUS MODE :



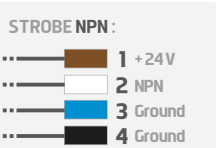
Voltage drop for connector M12 + 10 meter wire:	2.2V @ 4A	1.6V @ 3A	1.1V @ 2A	0.55V @ 1A

EMC IMMUNITY CONNECTIONS: for greater EMC immunity when using the light under Strobe operation, configure the signal connections as illustrated here. For Dimming, the Pin (5) should be connected to a voltage between 0V and 10V to ensure light output is correctly configured.

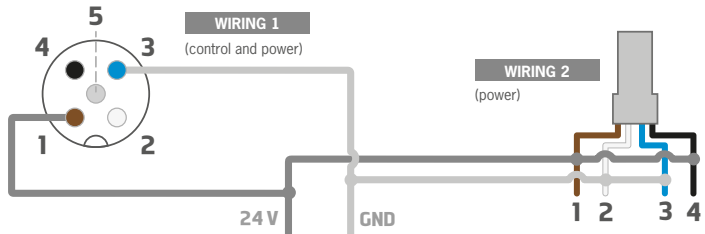
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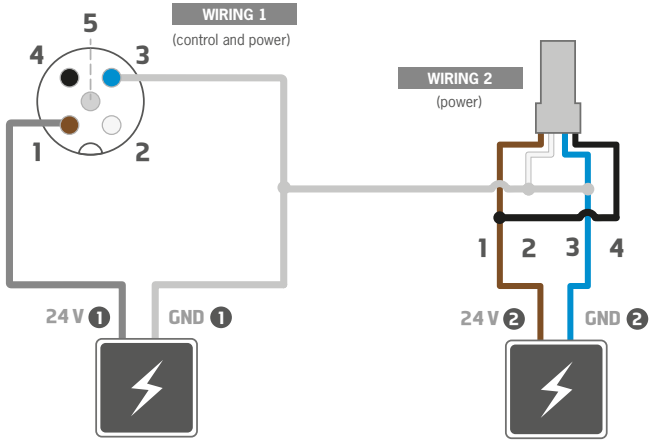
Double Wiring Version recommendation (for >0.25m² products only)



NOTE: Wiring 2 is only for power. M12 5P connector (wiring 1) operates as shown above for NPN, PNP and Dim 0-10V.

In the **DOUBLE WIRING** version, both wirings can be powered by **THE SAME POWER SUPPLY 24V**.

Double Wiring Version using 2 supplies recommendation (for >0.25m² products only)

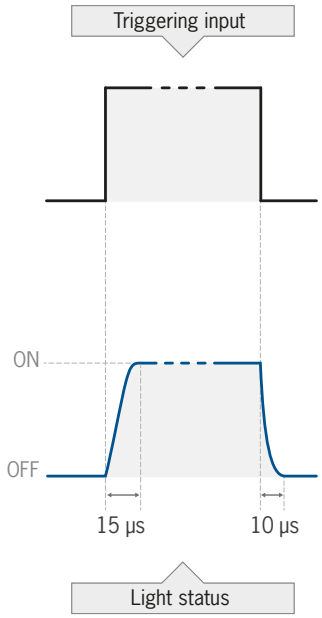


POWER SUPPLY 1
Power 1 (min) = 96W

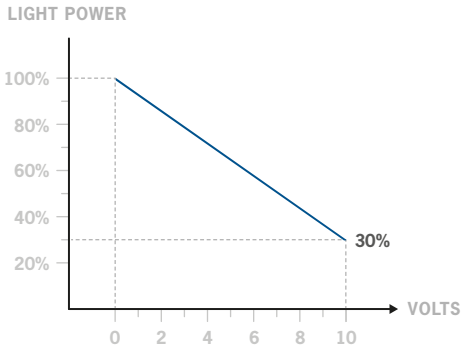
POWER SUPPLY 2
Power 2 (min) = total power – 96W

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.

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.

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 25.2V.
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)
Normal functioning Voltage	24V in the light input (±10%)
Max. functioning Voltage	30V in the light input
Max. consumption Strobe signal on largest product 500x500mm :	250mA
Max. consumption Dimming signal on largest product 500x500mm :	150mA
Optics	
Colour	White (6500k), Red (630nm) and Infrared (850nm)
Mechanics	
Thickness	45mm
Weight	23.2 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 50
Labels	RoHS-CE-DEEE

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.

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Features and presentations liable to changes without notice.

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