

LBAx101 › LBAx501
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.

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
Red 630 nm	0	none
White WHI, 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

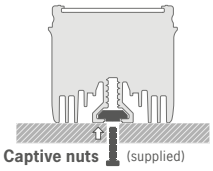


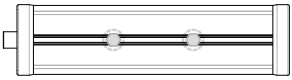
	Total length* (mm)	Height (mm)	Width (mm)	Useful length (mm)
	A	B	C	D
LBAx101	158	45	47.6	125
LBAx201	283	45	47.6	250
LBAx301	408	45	47.6	375
LBAx501	533	45	47.6	500

* Total length, without connector.

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

FIXING

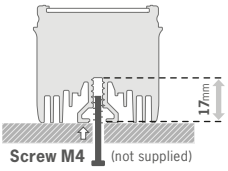




LBAx101	LBAx201	LBAx301	LBAx501
2 captive nuts	**2** captive nuts	**2** captive nuts	**4** captive nuts

Please use all the captive nuts. **NEVER REMOVE THEM FROM THE BAR.**

During the set up, the light has to be switched off and unplugged. Please use M4 screws and insert them in the captive nuts located in the back of the light. The light will be better fixed if you spread the attachment points symmetrically along the bar.

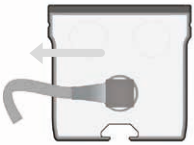


You can also use M4 screws (not supplied) fastened directly into Aluminium profile with a tightening torque from 0.5 to 1.5 Nm. We also recommend the use of a thread-locker (not supplied) to avoid any risk of loosening.

Additionally, there is the mounting accessory **ZBAZ001**, which can connect the bar light to surfaces and give 180° secure rotational adjustments.

IP65 +40°C -30°C 24V ±10%

WIRING



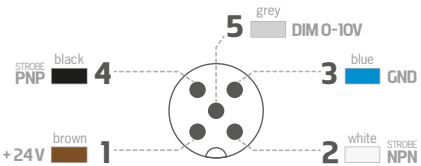
Front view



Top view

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

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.

STROBE **PNP** :

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

STROBE **NPN** :

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

VOLTAGE DROP

Dimensions	LBAx101	LBAx201	LBAx301	LBAx501
Max voltage drop in the bar (V)	0.01	0.03	0.06	0.12
Power supply cable : 4x1,5² max length for acceptable voltage drop (m)*	>150			

* For longer power supply cable, increase the section of the copper wire.

LED INDICATORS



ON : **Power** LED indicator
(product is powered)

Str. : **Strobe** LED indicator
(LEDs ar ON)

CONTROL

The product is optimised for a lifespan >50kh in a 40°C (104°F) atmosphere.
In strobe mode, the strobing time is directly equivalent to the time during which the strobe entry is activated.

STROBE PNP & NPN

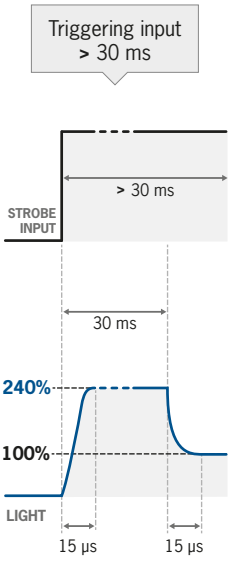
PNP : from 5 to 24V for 100% ON. From 0 to 1V for 100% OFF.
NPN : less than 1V for 100% ON. Above 2V for 100% OFF. Max 20V.

Brightness	D max	t max	f max
100%	N/A	CW	N/A
100% to 240%	1/5	30 ms	30Hz

D : Duty Cycle
t : pulse duration
f : frequency

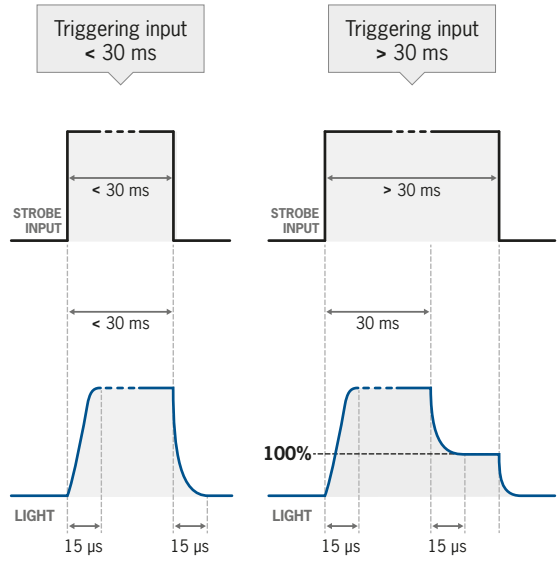
IP65 +40°C -30°C 24V ±10%

CONTINUOUS OPERATION



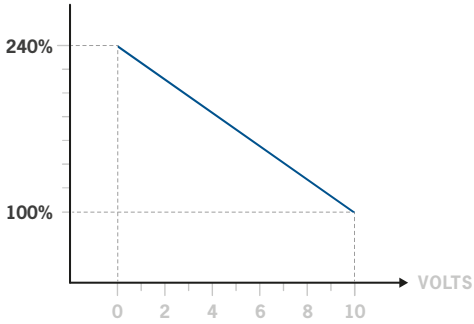
LED are supplied with 240% maximum current. After 30ms, LED are supplied at 100% level.

STROBE OPERATION



After 30ms, LED are supplied at 100% level.

DIMMING 0-10V - STROBE OPERATION



Potential dimming between 0 & 10 V.

At 0 Volts, the product reaches **240%** of its lighting power. Only usable in the Strobe mode.
Please consider a tolerance of ±5% when measuring the dimmed brightness levels.

POWER SUPPLY

	LBAx101	LBAx201	LBAx301	LBAx501
Consumption CW mode	0.3A	0.6A	0.9A	1.2A
Consumption Strobe mode*	1.2A	2.4A	3.6A	4.8A
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 and Dimming signal	10mA			

*strobed with 20% duty cycle.

USER SAFETY

Do not modify or dismantle all or part of the product.

Respect the power supply voltages and the connection terminals.

Ensure power supply is switched off whilst connecting product and turn on only once product is fully connected. Failure to do this may damage the product and invalidate the Warranty

Do not stare at the lighting source directly.
Follow advice below for installation to minimise operator exposure to the light source.

INSTALLATION GUIDANCE:

- Forbid or limit the direct access to the lighting source (exposure into the radiation axis).
- Establish a security perimeter to prevent the operators from approaching the lighting source beyond the recommendations of the manufacturer.
- If the workstation permits it, introduce a filter that will stop the lighting radiation under a fixed or adjustable frame between the source and the operator. When these measures cannot be implemented, supply the operators with glasses (class 4).

It is the responsibility of the persons installing this product to ensure that all means possible (such as those stated above) have been implemented to reduce exposure of the machine operators to the light emitted from this product.



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.

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.

OPERATING CONDITIONS

-30° to +40°C (-22° to +104°F) / 80% of humidity without condensation.
No thermal shock (max temperature variation: 10°C (18°F) in 24h).
Not for outdoor use.

Ref.WOI-010201-A1, 2025/10 edition.

Features and presentations liable to changes without notice.

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