

LBFxxxx
OPERATING INSTRUCTIONS

wenglor TPL

PREAMBLE

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, Blue 470 nm, 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.

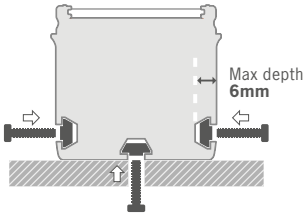
DIMENSIONS



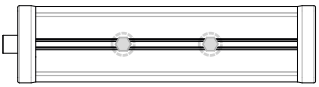
	Length* (mm)	Height (mm)	Width (mm)	Useful length (mm)
	A	B	C	D
LBFx101	158	45	47.6	125
LBFx201	283	45	47.6	250
LBFx301	408	45	47.6	375
LBFx501	533	45	47.6	500
LBFx601	658	45	47.6	625
LBFx701	783	45	47.6	750
LBFx801	909	45	47.6	875
LBFx901	1034	45	47.6	1000
LBFx902	1160	45	47.6	1125
LBFx903	1285	45	47.6	1250
LBFx904	1411	45	47.6	1375
LBFx905	1536	45	47.6	1500
LBFx906	1661	45	47.6	1625
LBFx907	1786	45	47.6	1750
LBFx908	1911	45	47.6	1875
LBFx909	2038	45	47.6	2000
LBFx910	2163	45	47.6	2125
LBFx911	2298	45	47.6	2250
LBFx912	2422	45	47.6	2375
LBFx913	2547	45	47.6	2500

* Total length, without connector.

FIXING



Captive nuts
(supplied)



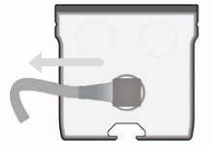
- Length (Lg) < 500mm: **2** captive nuts M4 per side
- 500mm ≤ Lg < 1000mm: **4** captive nuts M4 per side
- 1000mm ≤ Lg < 1500mm: **6** captive nuts M4 per side
- 1500mm ≤ Lg < 2000mm: **8** captive nuts M4 per side
- 2000mm ≤ Lg ≤ 2500mm: **10** captive nuts M4 per side

Please use the captive nuts for mounting.
NEVER REMOVE THEM FROM THE BAR.

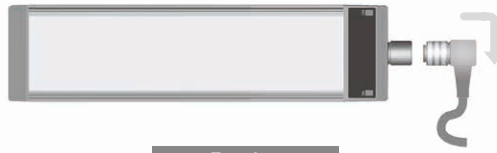
During the set up, the light has to be switched off and unplugged. Please use M4 screws and insert them in the captive nuts located in the back of the light. The light will be better fixed if you spread the attachment points symmetrically along the bar.

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

WIRING



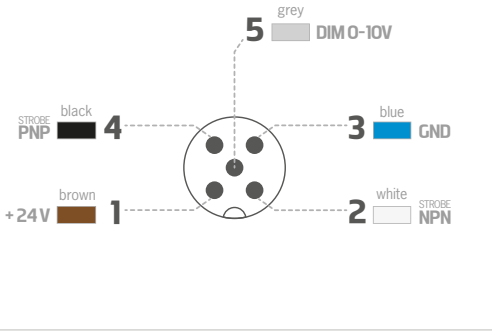
Front view



Top view

CONNECTION *(size: 125mm -1000mm)*

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

PNP : from 5 to 24V for 100% ON. From 0 to 1V for 100% OFF.
NPN : less than 2V for 100% ON. Above 2V for 100% OFF. Max 25.2V.

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

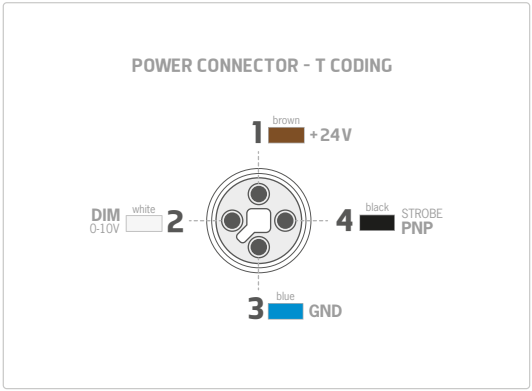
VOLTAGE DROP *(size: 125mm -› 1000mm)*

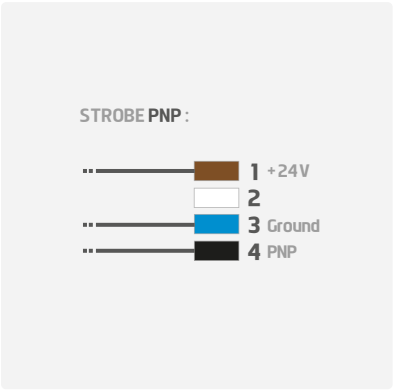
Dimensions	125	250	375	500	625	750	875	1000
Max voltage drop in the bar (V)	0.01	0.03	0.06	0.11	0.17	0.25	0.34	0.44
Power supply cable : 5x0,34² max length for acceptable voltage drop (m)*	180	90	60	43	34	27	23	20

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

CONNECTION *(size: 1125mm -›2500mm)*

M12 Connector 4 male points





PNP : from 3 to 24V for 100% ON. From 0 to 1V for 100% OFF.
NPN : NPN version is available on request as a custom product.

VOLTAGE DROP *(size: 1125mm -› 2500mm)*

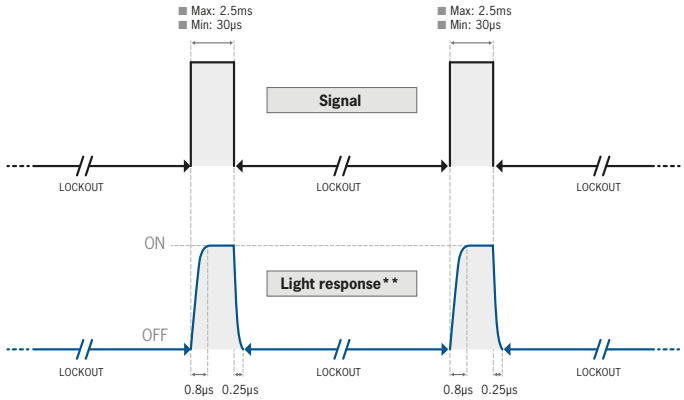
Dimensions	1125	1250	1375	1500	1625	1750	1875	2000	2125	2250	2375	2500
Max voltage drop in the bar (V)	0.56	0.69	0.7	0.72	0.75	0.8	0.86	0.94	1.03	1.13	1.25	1.38
Power supply cable : 5x0,34² max length for acceptable voltage drop (m)*	17	15	15	13	12	11	11	10	9	9	8	8

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

IP65 +40°C 0°C 24V ±5%

CONTROL

STROBE MODE

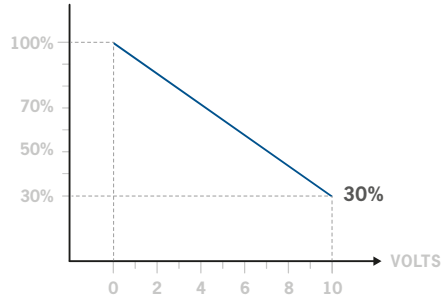


- **Duty cycle: 3.5%***
- **Max Ton: 2.5 ms**
- **Maximum operating frequency: 1000Hz**

*Product is protected from triggers during the lockout period.

** Product uses capacitor banks to keep consumption low. Please allow the product 3 seconds to charge after connecting to 24V Supply.

DIMMING 0-10V



Potential dimming between 0 & 10 V.

If the DIMMING pin is not connected, or with 0V applied to it, the product is at 100% of its lighting power. With 10V applied, it is reduced to 30% of 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.

POWER SUPPLY

	LBFx101	LBFx201	LBFx301	LBFx501	LBFx601	LBFx701	LBFx801	LBFx901	LBFx902	LBFx903	LBFx904	LBFx905	LBFx906	LBFx907	LBFx908	LBFx909	LBFx910	LBFx911	LBFx912	LBFx913
Average consumption (W)	8.4	16.8	25.2	33.6	42	50.4	58.8	67.2	75.6	84	92.4	100.8	109.2	117.6	126	134.4	142.8	151.2	159.6	168
Max. consumption **White** (W)	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240
Normal functioning voltage	24V in the light input (±5%)																			
Max. consump. Strobe & Dimming signal	<5mA																			

USER SECURITY

Do 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, as for eye irritation is concerned.
- In any case, ensure that the chosen means properly reduce the exposition quantities (features of screens or glasses to be chosen, according to the wavelengths that the operators are exposed to).

OPERATING CONDITIONS

0° to +40°C / 80% of humidity without condensation.
No thermal shock (max temperature variation: 10°C in 24h).
Not for outdoor use.



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.

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Features and presentations liable to changes without notice.

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