



HIGH POWER HPBACK USER GUIDE

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. TPL Vision will not be held responsible for problems caused by using the product contrary to these instructions and the Warranty will be deemed invalid.



■ UNPACKING

Products are packed in our factory, using suitable materials for a safe transport through the usual means of transportation, in France and internationally. However, a damaged package must be reported to the carrier on delivery. Hand-written reservations must be indicated on the delivery order. Moreover, please send a letter or an email to TPL Vision as soon as possible (up to 24 hours after the delivery). If the transportation damage has not been stipulated on the delivery order and reported to TPL Vision in time, the package will not be taken back nor exchanged. 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).

■ RISK CLASS

The EN-62471 norm about lighting fluxes enables the classification of led lightings in 4 distinct groups, according to their hazardousness degree. Please find below an indicative table, recapitulating the classes of risk for our standard products.

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

In all cases, TPL Vision recommends the use of **the protection glasses** that are listed in its catalog.

For more information about photo-biological risks, do not hesitate to contact us.

TPL Vision can provide guidance notes about the **nominal distance to minimize eye risks**.



BEWARE to the infrared light, invisible to the eyes.

To know if the light is on, please refer to the LED indicators.



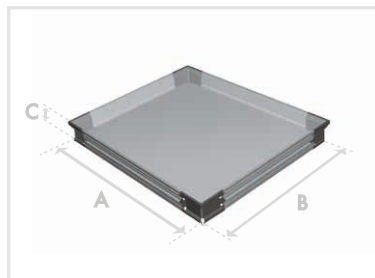
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■ DIMENSIONS

Length x Width (mm)	Height (mm)
A x B	C
Min : 200x200 ; Max: 900x900 or 1900x400	45

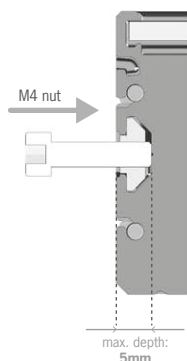
- **Useful surface:** A x B
- **Max. useful surface:** 0.88 m²
- **Max. useful perimeter:** 4.6 m
- **Total surface:** (A + (4mm x 2)) x (B + (4mm x 2))
(connector excluded)



■ FIXING

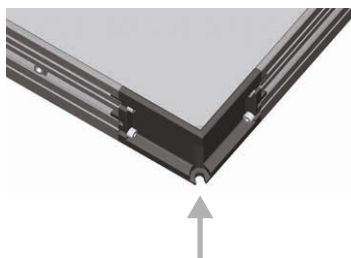
During the set up, the light has to be switched off and unplugged. Please use the fixing groove or holes designed for that purpose. We recommend the using of nuts (supplied) in the groove or M4 screws (not supplied) with a tightening torque from 0.5 to 1.5 Nm. We also recommend the use of a threadlocker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

FIXING ON THE LENGTH (groove)



(4 M4 nuts – supplied)

FIXING ON THE CORNER

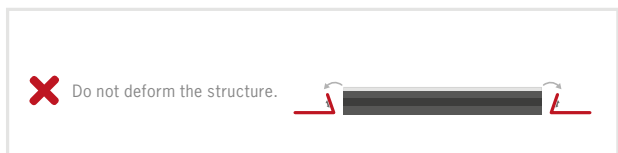
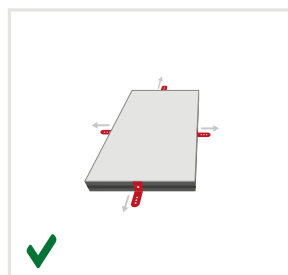
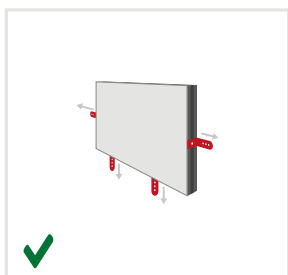
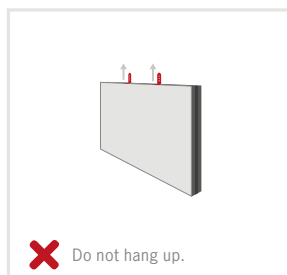


(CHC screw M4x20 – not supplied)

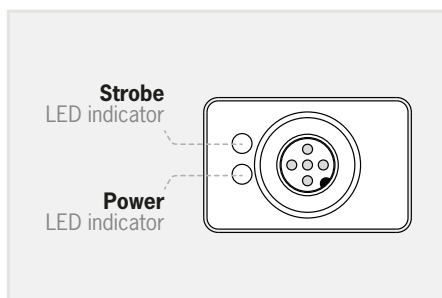


⚠ BE CAREFUL WHEN USING ANGLE BRACKETS.

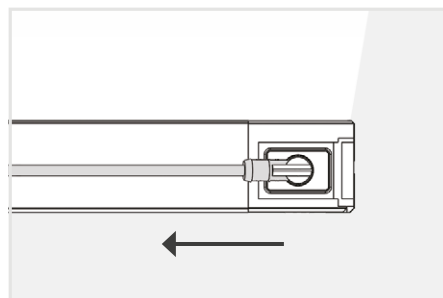
(TPL Vision reference: TPL-MOUNT-HPB-SQUARE1)



■ LED INDICATORS



■ RIGHT ANGLE CABLE DIRECTION



■ OPERATING CONDITIONS

Not for outdoor use.



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■ WIRING

SURFACE $\leq 0.25 \text{ m}^2$



1 M12 connector

SURFACE $> 0.25 \text{ m}^2$



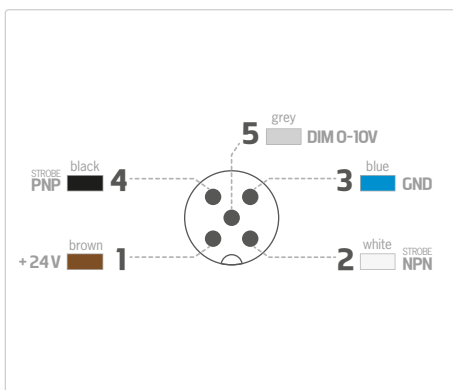
+



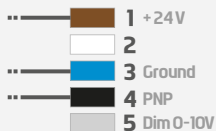
1 M12 connector + 1 additional power cable

■ CONNECTION

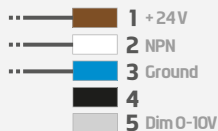
M12 Connector 5 male points



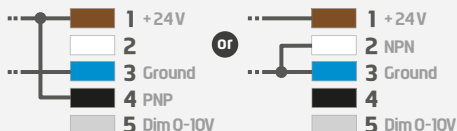
STROBE PNP :



STROBE NPN :



CONTINUOUS MODE :



Voltage drop for connector M12 + 10 meter wire:
(minimum voltage at product input: 20VDC)

2.2V @ 4A

1.6V @ 3A

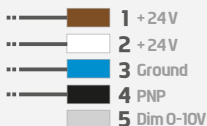
1.1V @ 2A

0.55V @ 1A

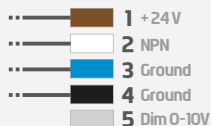
EMC IMMUNITY CONNECTIONS: for greater EMC immunity when using the light under Strobe operation, configure the signal connections as illustrated here. For Dimming, the Pin (5) should be connected to a voltage between 0V and 10V to ensure light output is correctly configured.



STROBE PNP :

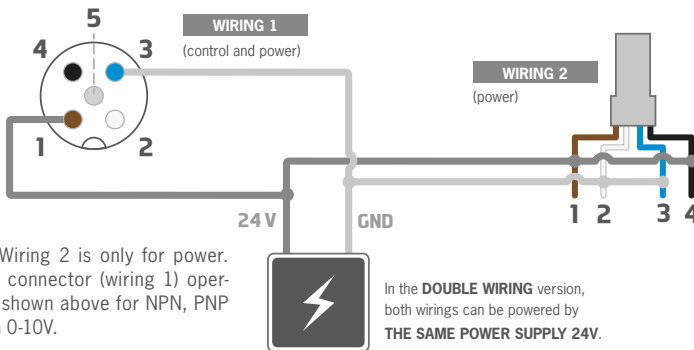


STROBE NPN :

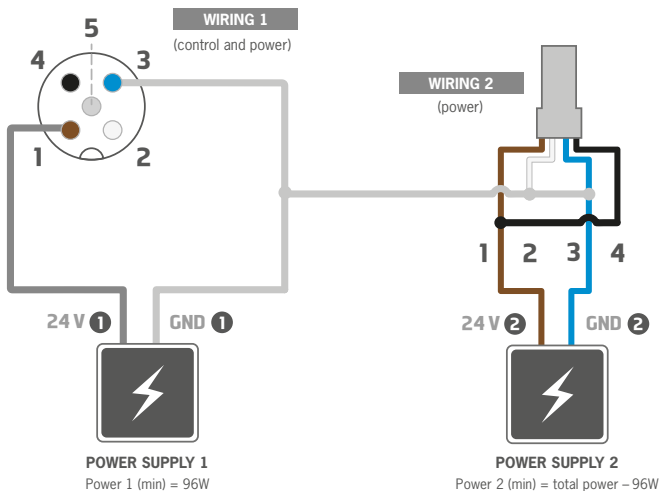




Double Wiring Version recommendation (for >0.25m² products only)

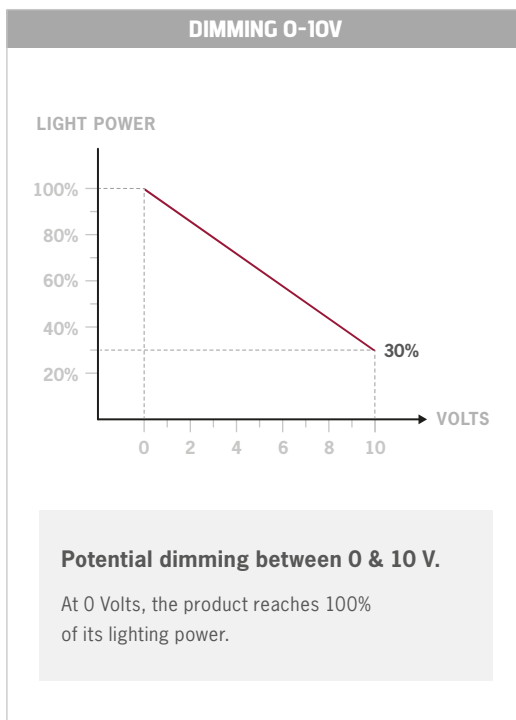
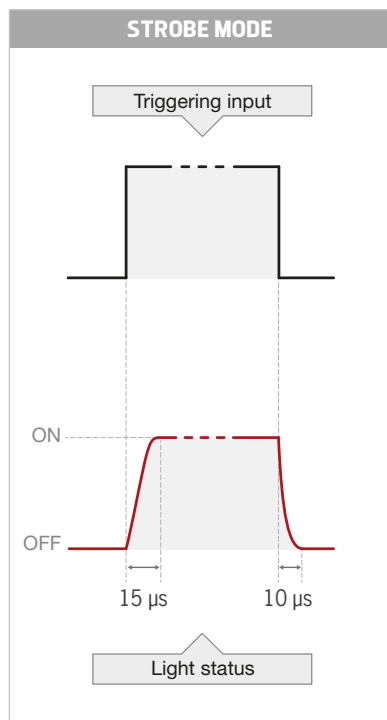


Double Wiring Version using 2 supplies recommendation (for >0.25m² products only)





■ CONTROL



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.

■ DIMMING SETTING

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



TECHNICAL INFORMATION

Electronics	
Power supply	24 VDC $\pm 10\%$
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 μ s
Maximum falling time	10 μ s
Control	Connector M12 5 Poles
Connector pin configuration	1: 24VDC / 2: NPN / 3: GND / 4: PNP / 5: DIM 0-10V
Consumption	<ul style="list-style-type: none"> • 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 ($\pm 10\%$)
Max. functioning Voltage	30V in the light input
Max. consumption Strobe signal on largest product 900x900mm :	250mA
Max. consumption Dimming signal on largest product 900x900mm :	150mA
Optics	
Colour	White (6500k), Red (630nm) and Infrared (850nm)
Mechanics	
Thickness	45mm
Lighting surface	Minimum: 0.2 x 0.2 m / Maximum Surface: 0.88m ² Maximum Length: 1.9m / Maximum Perimeter: 4.6m
Weight	23.2 Kg/m ² $\pm 15\%$
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



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■ 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) available for sale at TPL Vision.
- 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.

TPL Vision recommends to use isopropyl alcohol.



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TPL VISION
IS AN **ISO 9001**
CERTIFIED MANUFACTURER

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