



PREAMBLE

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RISK CLASS

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

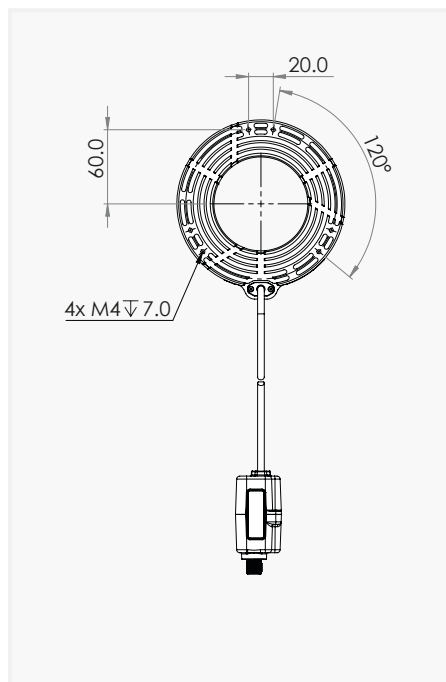
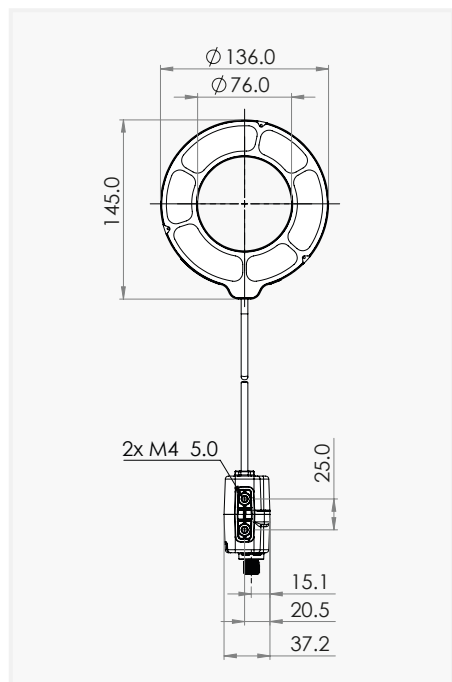


MODULAR M-HPRING **DT TYPE**

TECHNICAL USER GUIDE

P2/8

■ DIMENSIONS



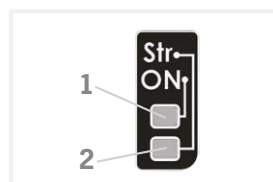
	External \varnothing (mm)	Internal \varnothing (mm)	Thickness (mm)
M-HPRING	136	76	28.7

	Length (mm)	Width (mm)	Thickness (mm)
Power supply	83.3	37.2	42.7

■ LED INDICATORS

The power supply is equipped with 2 LED indicators :

- **N°1:** indicates that the light is powered but the LEDs are not turned ON with this indicator alone.
- **N°2:** indicates that the LEDs are switched on.





ANGLE CHANGER FIXING

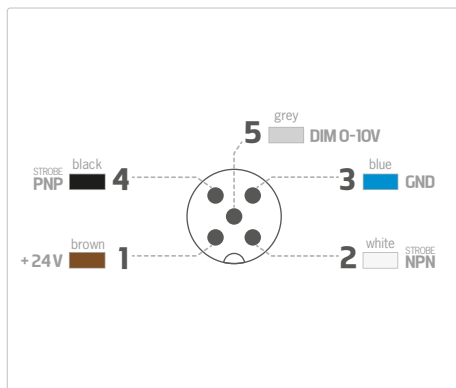


Use the **3 screws** (M2x10) delivered with the Angle Changer to secure it.

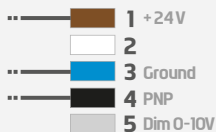
Recommended for final light installation.

CONNECTION

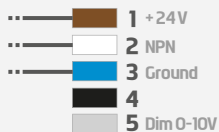
M12 Connector 5 male points



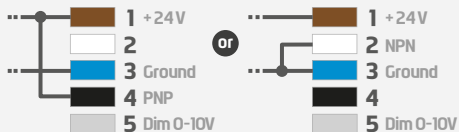
STROBE PNP :



STROBE NPN :



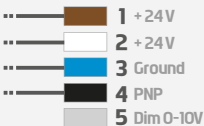
CONTINUOUS MODE :



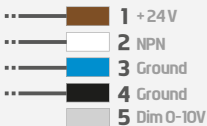
EMC IMMUNITY CONNECTIONS: for greater EMC immunity when using the light under Strobe operation, configure the signal connections as illustrated here. For Dimming, the Pin (5) should be connected to a voltage between 0V and 10V to ensure light output is correctly configured.



STROBE PNP :



STROBE NPN :





MODULAR M-HPRING DT TYPE

TECHNICAL USER GUIDE

P4/8

CONTROL

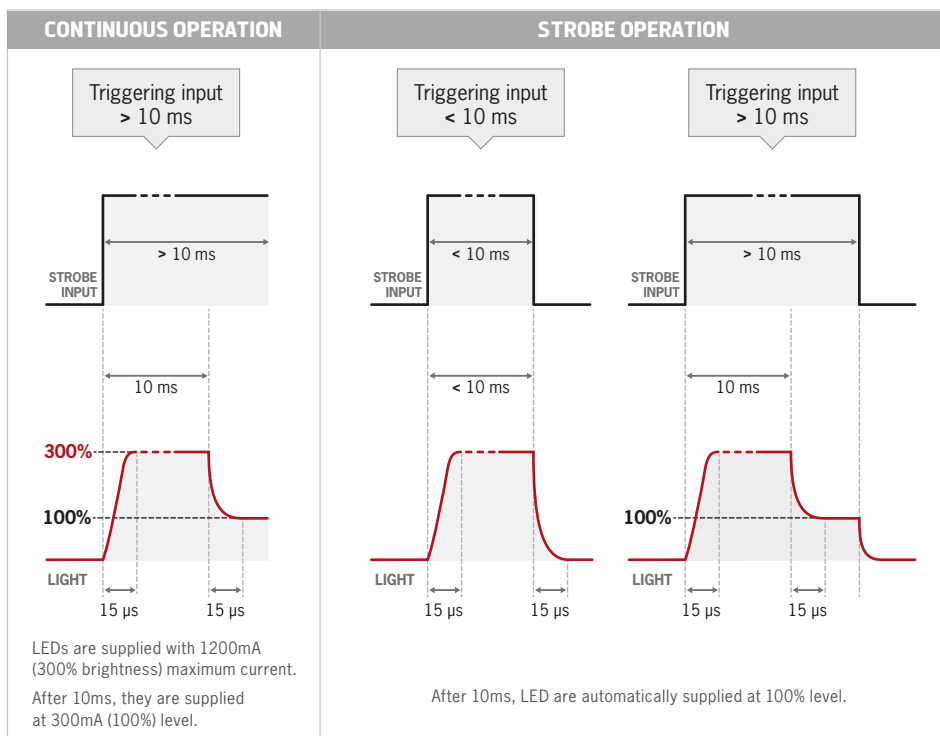
The product is optimised for a lifespan >50kh in a 40°C (104°F) atmosphere.
In strobe mode, the strobing time is directly equivalent to the time during which the strobe entry is activated.

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.

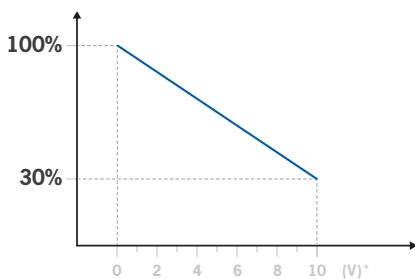
Brightness	D max	t max	f max
30% to 100%	N/A	CW	N/A
100% to 300%	10%	10 ms	750Hz

CW : Continuous Working
D : Duty Cycle
t : pulse duration
f : frequency





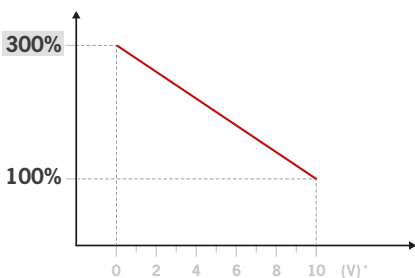
■ DIMMING 0-10V ON PIN 5



CONTINUOUS WORKING

Dimming during continuous working (CW) operation

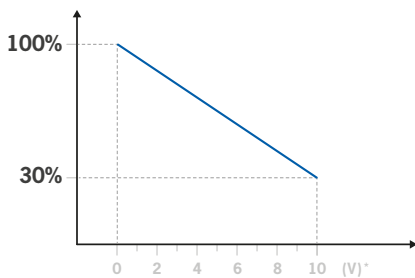
* Voltage applied to PIN 5.



STROBE OVERDRIVE ≤10ms ON TIME

Dimming during strobe mode
≤10ms maximum on time

* Voltage applied to PIN 5.



STROBE >10ms ON TIME

Dimming during strobe mode after
LEDs are ON for more than 10ms

* Voltage applied to PIN 5.



MODULAR M-HPRING **DT TYPE**

TECHNICAL USER GUIDE

P6/8

■ POWER SUPPLY

	M-HPRING
Consumption CW mode	0.9A
Consumption Strobe mode*	3.6A
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 and Dimming signal	10mA

* Strobed with 10% duty cycle – this is the peak consumption. You must use a power supply with this rating.

■ 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) available from TPL Vision.

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.



High ambient temperatures and insufficient heat dissipation can lead to hot housing surfaces. Do not touch the light during operation. Keep a minimum distance of 20 mm between the light and thermally insulating surfaces or mount the light on a thermally conductive surface.



■ 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.

■ OPERATING CONDITIONS

-10° to +40°C (14° to +104°F) / 80% of humidity without condensation.
No thermal shock (max temperature variation: 10°C (18°F) in 24h).
Not for outdoor use.



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contact@tpl-vision.co.uk

TPL VISION
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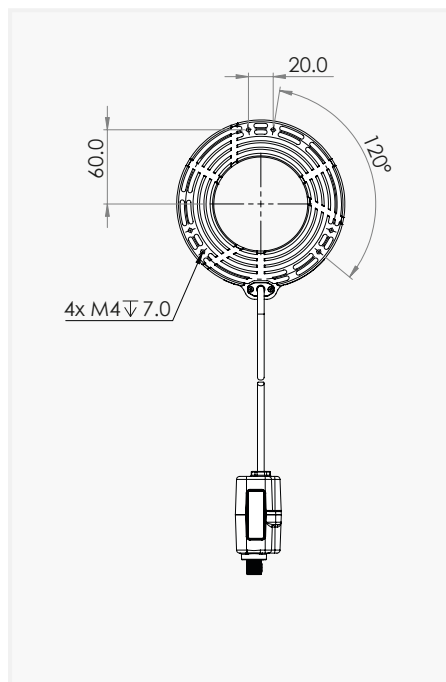
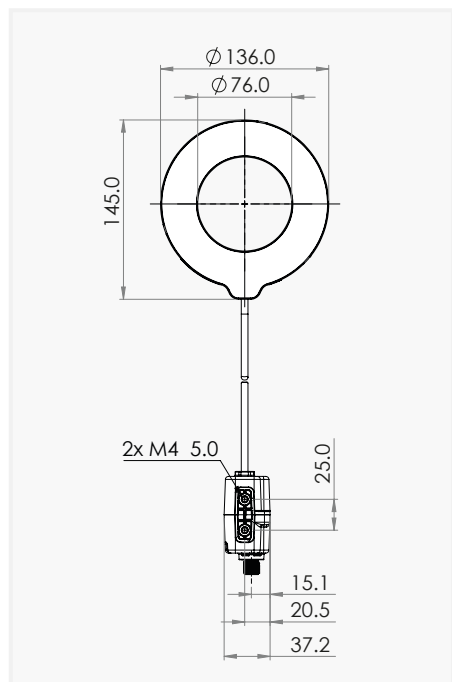


MODULAR M-HPRING DO TYPE

TECHNICAL USER GUIDE

P2/8

DIMENSIONS



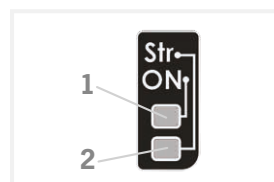
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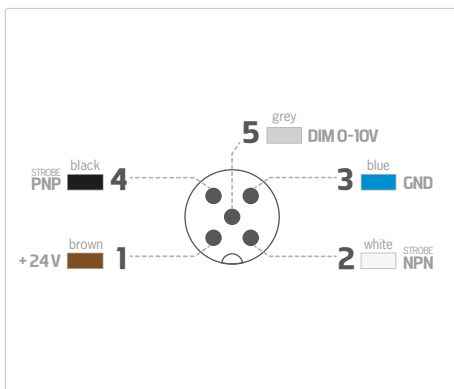
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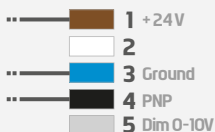


CONNECTION

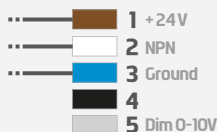
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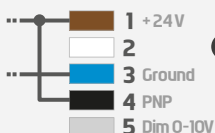
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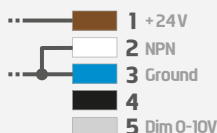
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CONTINUOUS MODE :



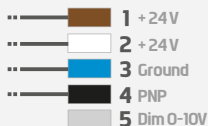
or



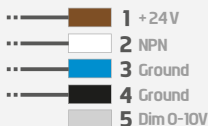
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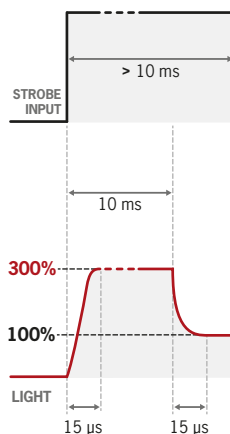
MODULAR M-HPRING **DO TYPE**

TECHNICAL USER GUIDE

P4/8

CONTINUOUS OPERATION

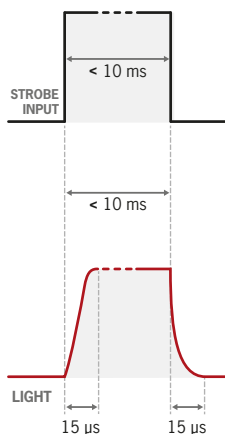
Triggering input
> 10 ms



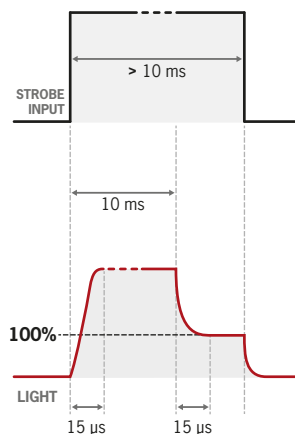
LEDs are supplied with 1200mA (300% brightness) maximum current.
After 10ms, they are supplied at 300mA (100%) level.

STROBE OPERATION

Triggering input
< 10 ms



Triggering input
> 10 ms



After 10ms, LED are automatically supplied at 100% level.

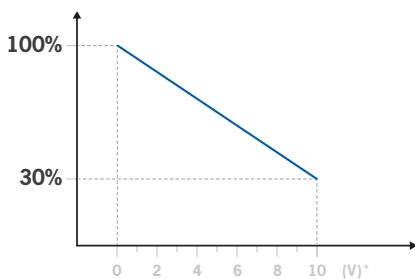
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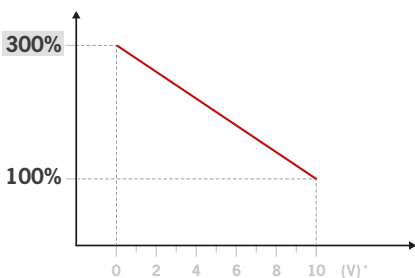
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Dimming during continuous working (CW) operation

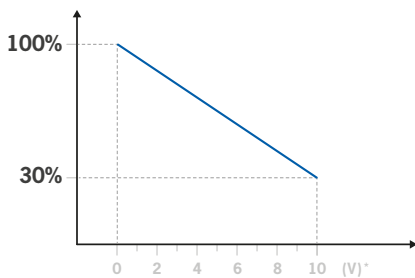
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