TPL VISION
Active LED solutions

ESSENTIAL ELINE
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.

IP50 +40°c -10°c 24V ±10%

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
Green 525 nm, Red 630 nm, IR 850 nm	1	low
White WHI, Blue 470 nm, UV 405 nm, UV 385 nm, UV 365 nm	2	moderate

For more information about photobiological risks, do not hesitate to contact us.

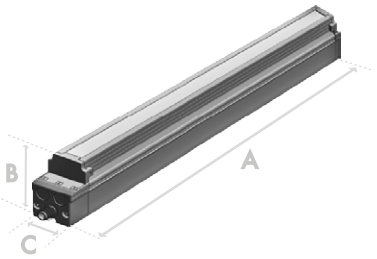
TPL Vision can provide calculation notes about **the nominal distance of eye risks** (security distance).

BEWARE to the infrared light, invisible to the eyes.
To know if the light is on, please refer to the LED indicators.

DIMENSIONS

A: length (mm)	
ELINE 125	158
ELINE 250	283
ELINE 375	408
ELINE 500	533
ELINE 625	658
ELINE 750	783
ELINE 875	908
ELINE 1000	1033
ELINE 1125	1158
ELINE 1250	1283

A: length (mm)	
ELINE 1375	1408
ELINE 1500	1533
ELINE 1625	1658
ELINE 1750	1783
ELINE 1875	1908
ELINE 2000	2033
ELINE 2125	2158
ELINE 2250	2283
ELINE 2375	2408
ELINE 2500	2533

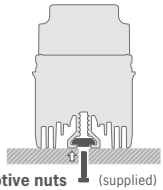


B: height (mm)	71

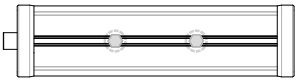
C: width (mm)	48

* Total length, without connector.

FIXING



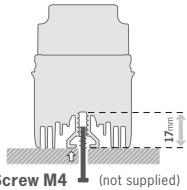
Captive nuts (supplied)



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

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

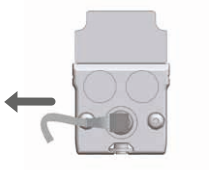
During the set up, the light has to be switched off and unplugged. Please use M4 screws and insert them in the captive nuts located in the back of the light. The light will be better fixed if you spread the attachment points symmetrically along the bar.



Screw M4 (not supplied)

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.

WIRING



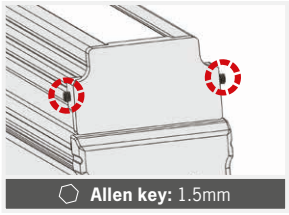
Front view

Top view

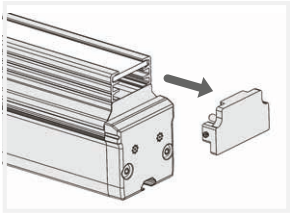
MODIFYING YOUR ELINE

BEWARE:
NOT FOR **UV** VERSIONS

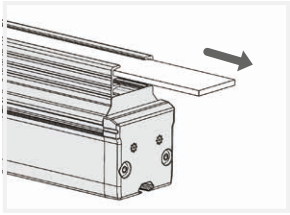
HOW TO DISMANTLE THE TOP PART OF THE BAR



Remove 1 end cap ONLY. Loosen the headless screws on both sides.

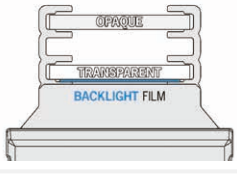


Remove the end cap from the bar.



Remove the window by sliding it.

BACKLIGHT VERSION

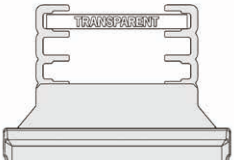


- Place the **Backlight film** (with a **blue** sticker) on the bottom part.
- Insert the **transparent diffuser** above the film and the **opaque one** in the upper part.

FOCUSED VERSION

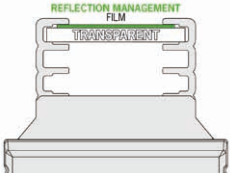
- Place the **Focused film** (with a **red** sticker) on the top part.
- Then, insert the **transparent diffuser** above the film.

COLLIMATED VERSION



The **Collimated** version requires the **transparent diffuser** in the top part only.

REFLECTION MANAGEMENT FILM



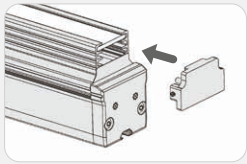
Place the **Reflection Management film** (with a **green** sticker) above the **transparent diffuser**.

HOW TO RECOGNIZE THE FILMS ?

You can easily distinguish the different films thanks to the **colored stickers** on them:

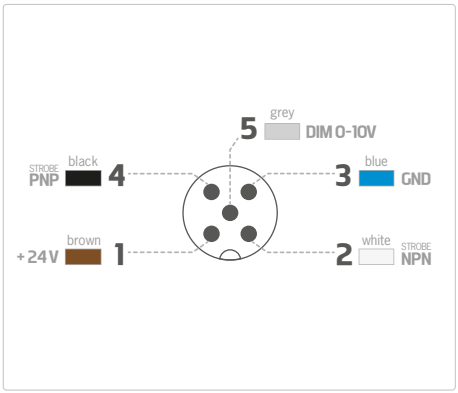
- Backlight film
- Focused film
- Reflection Management film

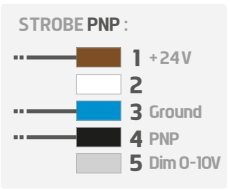
Once you have inserted the correct film and diffuser, please **tighten** the end cap back onto the bar using the headless screws.

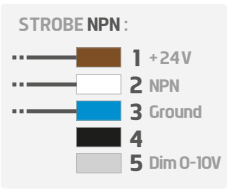


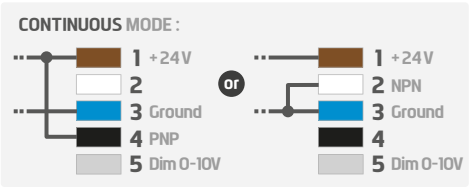
CONNECTION (SIZE 125mm –› 1250mm)

M12 Connector 5 male points



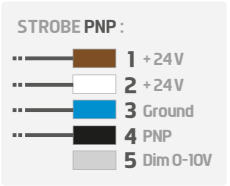


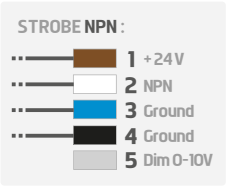




PNP : from 5 to 24V for 100% ON. From 0 to 1V for 100% OFF.
NPN : less than 1V for 100% ON. Above 2V for 100% OFF. Max 20V.

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.





VOLTAGE DROP (Size 125mm –› 1250mm)

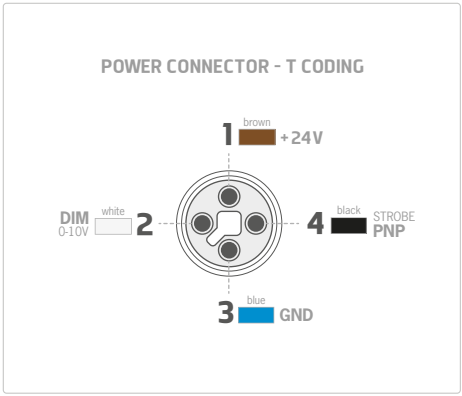
Dimensions	125	250	375	500	625	750	875	1000	1125	1250
Max voltage drop in the bar (V)	0.01	0.03	0.06	0.11	0.17	0.25	0.34	0.44	0.56	0.69
Power supply cable : 5x0,34² max length for acceptable voltage drop (m)*	180	90	60	43	34	27	23	20	17	15

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

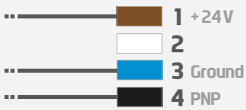
The **M12 male connector 5 points** is **COMPLIANT** with the M12 female connector 4 points.
In that case, the dimming option is not available.

CONNECTION (SIZE 1375mm –› 2500mm)

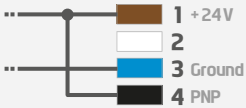
M12 Connector 4 male points



STROBE **PNP** :



CONTINUOUS MODE :



PNP : from 5 to 24V for 100% ON. From 0 to 1V for 100% OFF.

VOLTAGE DROP (Size 1375mm –› 2500mm)

Dimensions	1375	1500	1625	1750	1875	2000	2125	2250	2375	2500
Max voltage drop in the bar (V)	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)*	15	13	12	11	11	10	9	9	8	8

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

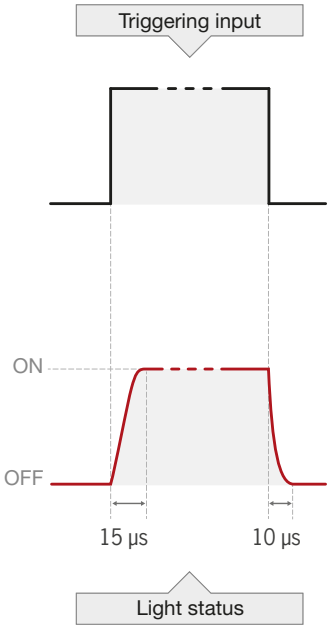
LED INDICATORS

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

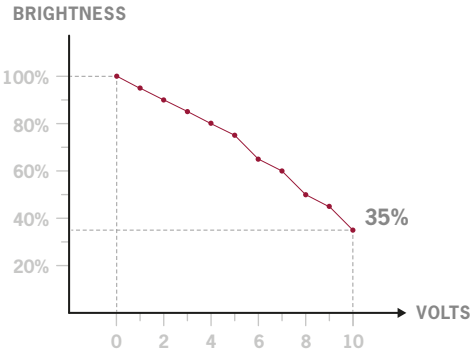
Str. : **Strobe** LED indicator
(LEDs ar ON)

CONTROL

STROBE MODE



DIMMING CONTROL



Voltage (VDC)	0	1	2	3	4	5	6	7	8	9	10
Brightness	100%	95%	90%	85%	80%	75%	65%	60%	50%	45%	35%

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 35% 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.

OPERATING CONDITIONS

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

POWER SUPPLY

	125	250	375	500	625	750	875	1000	1125	1250
Max. consumption **White/Red/IR** (W)	8	15	23	31	39	46	54	62	69	77
Max. consumption **Blue/Green** (W)	12	24	36	48	61	73	85	97	109	121
Max. consumption **UV** (W)	10	19	29	39	47	57	66	76	86	95

	1375	1500	1625	1750	1875	2000	2125	2250	2375	2500
Max. consumption **White/Red/IR** (W)	85	92	100	108	116	123	131	139	146	153
Max. consumption **Blue/Green** (W)	133	145	157	169	182	194	206	218	230	242
Max. consumption **UV** (W)	105	114	124	133	163	172	182	191	201	210

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

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) 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, 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).

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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Active LED solutions

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