Preamble

This notice includes all the advice and warnings that enables a correct set up and a safe use of the product. TPL Vision cannot be responsible for the bad use of the notice. If so, TPL Vision cancels the guarantee's effects.

Power supply

Do not connect to 24VDC. Use a Gardasoft TRINITI current controller only.

Connection between the current controller and the light:

If you want to use the light in strobe mode, TPL Vision recommends the use of shielded cables to reduce electromagnetic radiation. The company also recommends to connect the strap to the ground at one single point. The light body should also be grounded. The 2 grounds must be the same (star connection and not in series).

TPL Vision's TRINITI COMPLIANT Products are made for applications where the light is used in strobe mode. If you want to use the light in continuous mode, please select the Plug & Light versions.

Voltage drops:

TPL Vision's M12 4 pins T-Power connectors carry 12A in continuous mode (24VDC) and 25A in strobe mode. Gardasoft's TRINITI controllers can provide a «Vout» output voltage up to 48VDC but require a threshold (Vout - VLED) of 2.5V to properly work. Consequently, it is imperative to consider the possible voltage drops in the cable.

Below is a chart given as an example for a 4x0.75² cable of 10 meters:

<table>
<thead>
<tr>
<th>Voltage (V)</th>
<th>Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2.1</td>
<td>10</td>
</tr>
<tr>
<td>3.1</td>
<td>15</td>
</tr>
<tr>
<td>4.2</td>
<td>20</td>
</tr>
<tr>
<td>Max: 20</td>
<td></td>
</tr>
</tbody>
</table>

The cables are not supplied with the lights. Please only use TPL Vision cables.

Unpacking

Products are packed in our factory, using suitable materials for a safe transport through the usual means of transportation, in France and abroad. 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 so as to avoid damages on the product. Please use the delivered accessories, if needed (do not use any other products or equivalents to replace the delivered accessories).
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.

### 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.

As the TRINITI COMPLIANT range gives total freedom to users as from the operating conditions point of view, we cannot communicate risk classes for each product. However, you will find below a table given for information, detailing the risk classes for our standard products (lights in continuous mode). In any case, we advise you to design machines that avoid direct exposure to light.

<table>
<thead>
<tr>
<th>Colour</th>
<th>Class</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>White WHI, Green 525 nm, Red 630 nm</td>
<td>0</td>
<td>none</td>
</tr>
<tr>
<td>UV 405 nm, Blue 470 nm, IR 850 nm</td>
<td>1</td>
<td>low</td>
</tr>
<tr>
<td>UV 365 nm</td>
<td>2</td>
<td>moderate</td>
</tr>
<tr>
<td>UV 385 nm</td>
<td>3</td>
<td>high</td>
</tr>
</tbody>
</table>

In all cases, TPL Vision can provide calculation notes about the nominal distance of eye risks (security distance).

**BEWARE to the infrared light and ultraviolet light**, invisible to the eyes.

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

### Fixing

During the setup, the light has to be switched off and unplugged.

> EBAR+ & BLBAR+

Please use the delivered nuts and insert them in the groove located in the back of the light. The light will be better fixed if you spread the attachment points as indicated on the schemes below. You can also use 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**

>>> MBACK+ & MF DOME+

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 Groove and Corner Diagrams](image)

**BEWARE**

to the use of angle brackets

- Do not deform the structure.
- Do not hang up.

>>> SB ACK II & TSPOT 4

Please use the fixing holes designed for that purpose (see schemes below). We recommend the using of 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.
**WARNING**

Do not connect to 24VDC. You need a TRINITI CURRENT CONTROLLER.

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**FIXING**

### HPRING, TRING & TSPOT1

Please use the fixing holes designed for that purpose (see schemes below). We recommend the using of M3 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.

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### SBAR

Please use the 2 delivered nuts and insert them in the groove located in the back of the lighting. The lighting will be better fixed if you spread the attachment points as indicated on the scheme. We recommend the using of M8 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**

>> SDOME II 80 & 130, LOW ANGLE II 80 & 130

Please use the fixing holes designed for that purpose (see schemes below). We recommend the using of M5 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.

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**DO NOT CONNECT TO 24VDC.**

**YOU NEED A TRINITI CURRENT CONTROLLER.**
PREAMBLE

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POWER SUPPLY

DO NOT CONNECT TO 24VDC.
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</thead>
<tbody>
<tr>
<td>1V</td>
<td>5A</td>
</tr>
<tr>
<td>2.1V</td>
<td>10A</td>
</tr>
<tr>
<td>3.1V</td>
<td>15A</td>
</tr>
<tr>
<td>4.2V</td>
<td>20A</td>
</tr>
<tr>
<td>Max: 20A/cable</td>
<td></td>
</tr>
</tbody>
</table>

The cables are not supplied with the lights. Please only use TPL Vision cables.
**LED DRIVE – PRODUCT LIMITS**

The TRINITI controllers ensure product protection against the risk of being supplied by too high currents versus the conditions of use. For more information, please refer to the controller operating instructions.

**CHOICE OF THE EXTERNAL CURRENT CONTROLLER**

The choice of the controller depends on the current that you want to send in the light. Only these controllers are registered for TRINITI COMPLIANT products.

The certified controllers, that ensure a 3-year warranty to products, are:

- **TPL-TR-RC120** TRINITI 1 channel 2A pulse controller - keypad and Ethernet configuration
- **TPL-TR-RC122** TRINITI 1 channel 10A pulse controller - keypad and Ethernet configuration
- **TPL-TR-RT220-20** TRINITI 2 channel 20A pulse controller - Ethernet configuration
- **TPL-TR-RT220-2** TRINITI 2 channel 2A pulse controller - Ethernet configuration
- **TPL-TR-RT220F-2** TRINITI 2 channel 2A fast pulse controller - Ethernet configuration
- **TPL-TR-RT420-20** TRINITI 4 channel 20A pulse controller - Ethernet configuration
- **TPL-TR-RT420-2** TRINITI 4 channel 2A pulse controller - Ethernet configuration
- **TPL-TR-RT420F-20** TRINITI 4 channel 2A pulse controller - Ethernet configuration
- **TPL-TR-RT420F-2** TRINITI 4 channel 2A fast pulse controller - Ethernet configuration

**IP PROTECTION**

<table>
<thead>
<tr>
<th>IP Protection</th>
<th>IP30</th>
<th>IP40</th>
<th>IP65</th>
<th>IP66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential EBAR+</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Backlight BLBAR+</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Medium MBACK+</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Medium Flat MFIDDLE</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Small SBACK II</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>High Power HPRING</td>
<td></td>
<td></td>
<td>X</td>
<td>X*</td>
</tr>
<tr>
<td>TRING</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thin TSPOT 1</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Thin TSPOT 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spot SBAR</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Small SDOME II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOW ANGLE II</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

* Optional.
DO NOT CONNECT TO 24VDC.
YOU NEED A TRINITI CURRENT CONTROLLER.

**OPERATING CONDITIONS**

-10° to +40°C / 80% of humidity without condensation.
No thermal shock (max temperature variation: 10°C in 24h).

**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, or with a dedicated protective mask, that will stop the lighting radiation.
- 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**.