TERRAGON 80

User & Installation Manual

Introduction

TERRAGON series are IP67/IP68 in-ground linear luminaires offered by Electron SA for outdoor applications. They are most used for wall washing and big surfaces illumination, but they can also cover other lighting needs.

They are available in RGBW, monochromatic and tunable white versions with tilt angle adjustment.

All models are dimmable.

TERRAGON is available in lengths of 31cm, 56cm and 106cm, with two voltage options, Constant Power models at 24VDC and High Efficient models from 24VDC up to 48VDC.

At ELECTRON we value each and every customer, and we want to thank you for your purchase of TERRAGON. We believe that this manual will serve as a useful guide and resource for you, and we look forward to hearing your feedback.

Please note that before using this equipment it is mandatory, for safety reasons and for the proper use of TERRAGON, to read carefully this user manual.

General notes and precautions.

Before first use.

- Make sure to read thoroughly all the instructions before using the TERRAGON 80.
- In case that you do not understand any of the instructions or have any doubt for the installation or operation of the TERRAGON 80, please consult your supplier.
- The installation of TERRAGON 80 must be done by a specialized technician.

Installation.

- TERRAGON 80 must not be installed, in any case, on flammable areas.
- Do not install TERRAGON 80 near any kind of heating source.
- All connections and wiring of TERRAGON 80 are IP 68 graded
  It is the installer's responsibility to ensure that all connections are properly executed in order to maintain that IP grade.
- Make sure that the power supply is turned off during the installation procedure.

Mechanical.

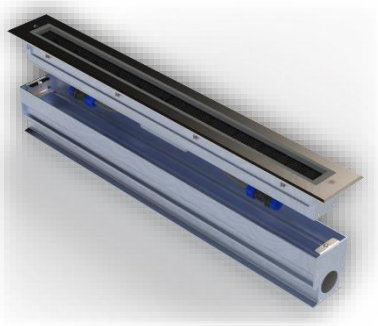
- Make sure that TERRAGON 80 is properly installed, safely mounted and connected.
- When needed, the replacement of the front glass and lenses must be done by using authentic spare parts only and from authorized technicians.

Electrical.

- The luminaire must be connected only by a qualified electrician.
- The supply input of multichannel TERRAGON 80 models (RGBW, Tunable white) is common anode and the appropriate power supply and controller should be used.
- Dimming can be accomplished by PWM (up to 2kHz) on power supply input.
- TERRAGON are class III devices.
- Disconnect the power supply for any service.

General.

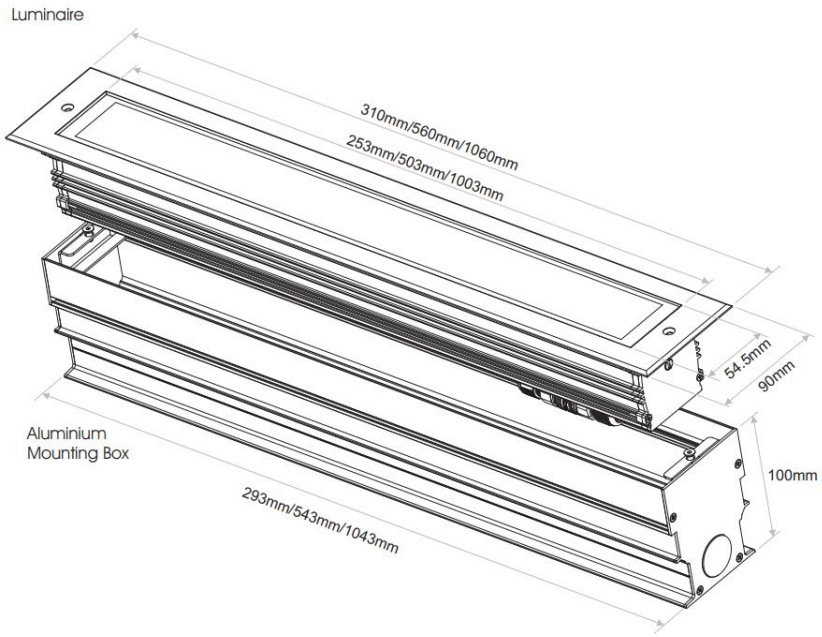
- Do not look directly to the TERRAGON'S light source when it's turned on.
- Do not try to fix any damage or malfunction, by opening TERRAGON. This must be done by an experienced and specialized technician of your supplier.
- TERRAGON should be cleaned only with a soft cloth and water.
- The manufacturer is not responsible for any injury or damage that will occur from the improper installation or use of the product.
- The safety of this fixture is guaranteed only if you comply with the following instructions.
- Make sure that all the local laws and regulations are followed during the installation procedure.
- Remember to conserve these instructions in a safe place.
- At the end of its lifetime TERRAGON must be delivered in a special waste collection center. The improper disposal can cause damages for the environment and poses dangers for the human health.

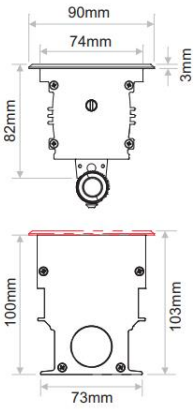


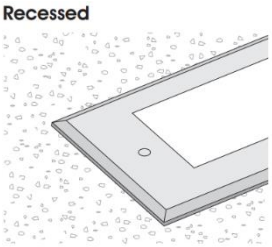
Physical Information

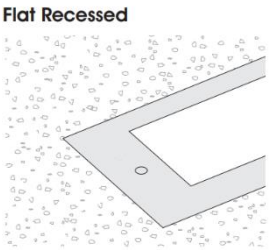
Model	Luminaire Length	Mounting Box Length	Weight
TERRAGON 80	31cm	254 mm	**2,50kg**
	56cm	504 mm	**5,00kg**
	106cm	1004 mm	**7,50kg**

Table 1









Recessed

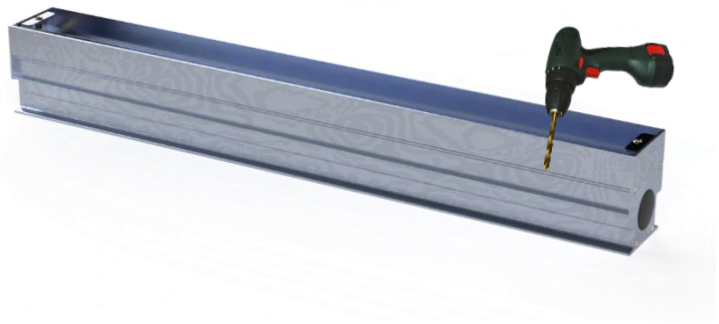
Flat Recessed

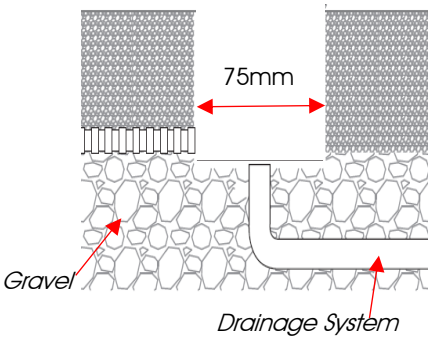
Installation.

Before starting the installation, please read the section "General notes and precautions".

Mount the installation box in the desired area, the area has to be level and uniform.

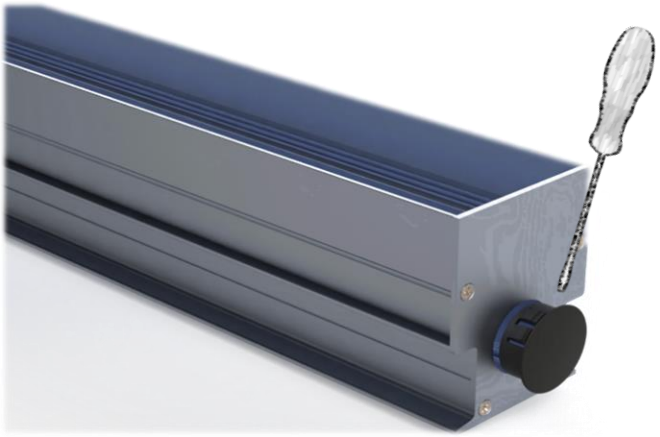
ATTENTION: Make sure that there is an appropriate drainage system, to avoid accumulation of standing water.





Remove the protecting plug and install an electrical tube in the pre-arranged position (a), then pass the necessary cables through.

(a)



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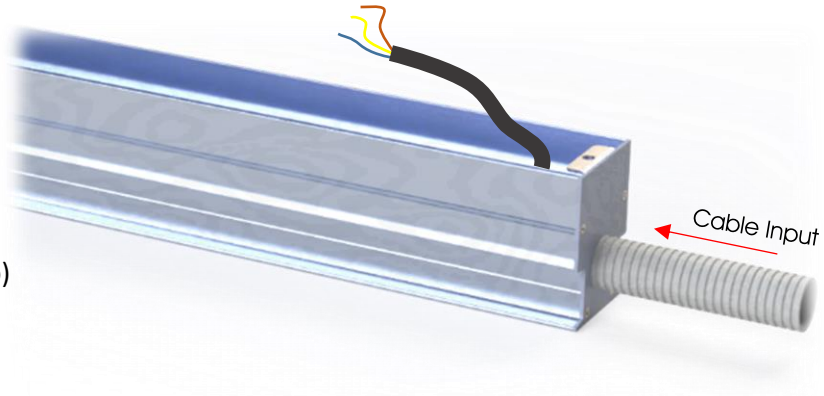
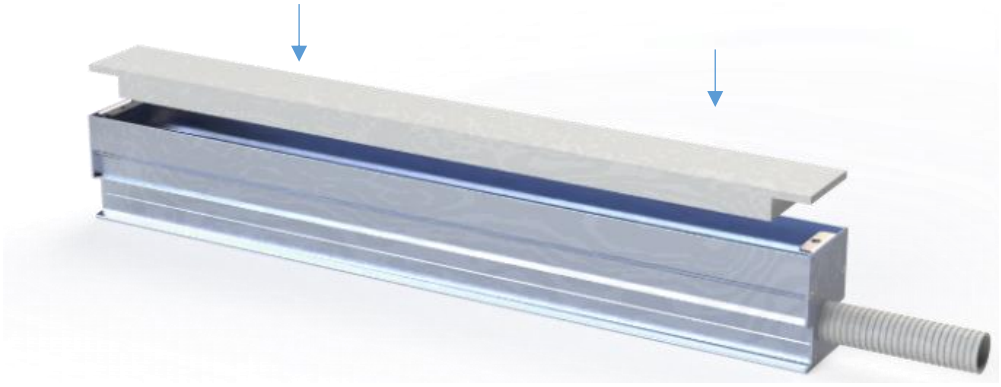
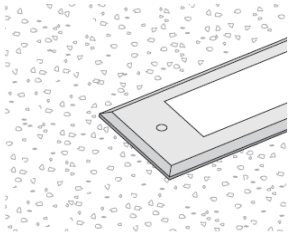


Plug all the openings and place the provided Styrofoam in the mounting box.

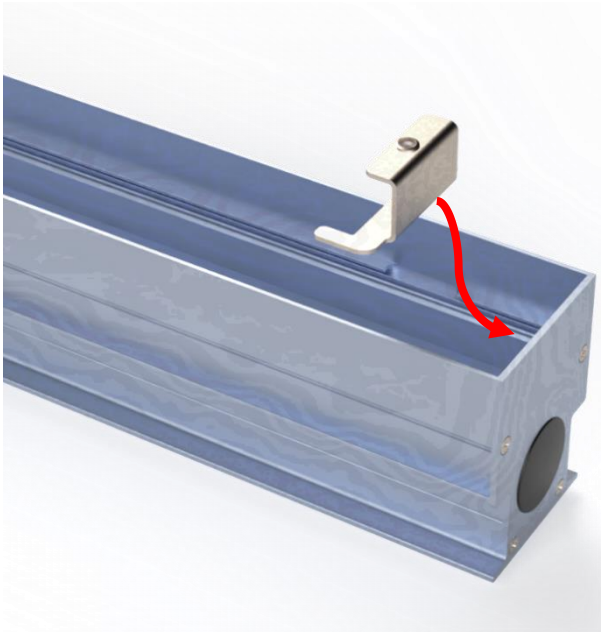
The installer must make sure that the concrete will not enter the mounting box or all the other components.

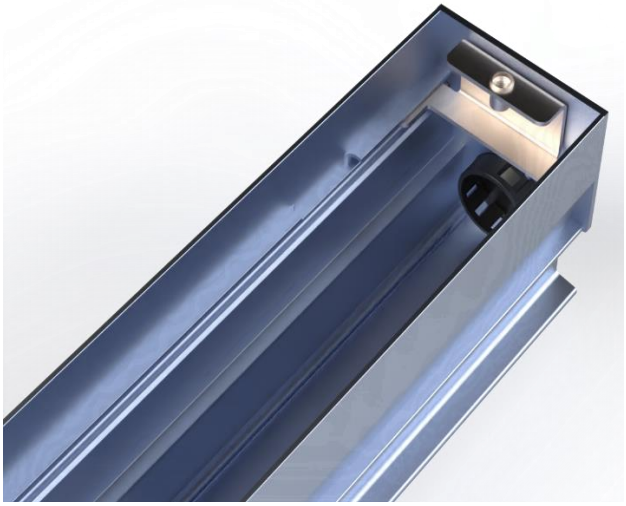
Recessed Installation





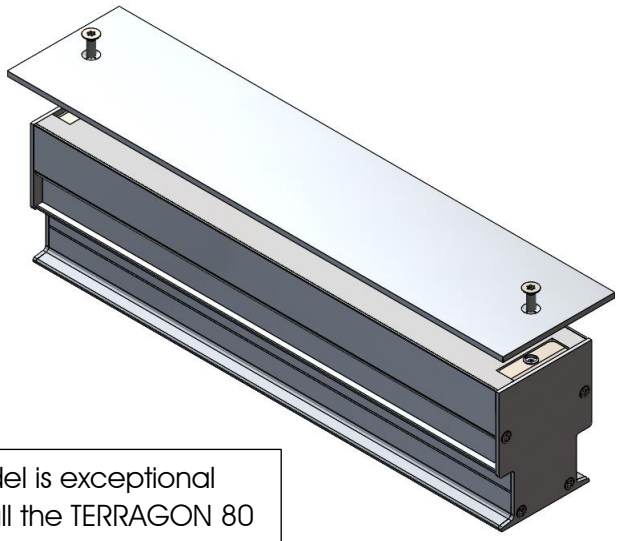
With the mounting box firmly secured an all the electrical tubes and cables arranged then the concrete can be poured. Once the concrete is set then the Styrofoam can be removed, and the provided luminaire holders can be installed in place.

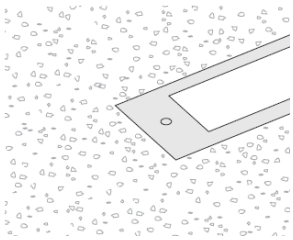




Flat Recessed Installation.

Install the provided luminaire holders and Styrofoam as shown above, then the Flat Recessed aluminum installation aid can be mounted.





The flat recessed model is exceptional when you wish to install the TERRAGON 80 on marble or wooden floor, blending in with the environment, creating a homogeneous appearance.

Adjust the tilt angle of the light source by turning clockwise or counterclockwise the adjustment screw, using a flat screwdriver, the angle can be altered by 30° in total, from
-15° to +15°.

Cables and power connector's description.

TERRAGON 80 is delivered with input power connector as standard.

Each connector pole has a numerical description that must match the numerical description of the cable.

Pins layout possition	**Cable's Numerical Description**
Monochromatic Model:	
Terminal1: Positive (+)	Wire No1
Terminal 2: Negative (-)	Wire No2
Tunable White Model	
Terminal1: Common (+)	Wire No1
Terminal 2: Warm (-)	Wire No2
Terminal 3: Cool (-)	Wire No3
RGBW Model	
Terminal1: Common (+)	Wire No1
Terminal 2: Red (-)	Wire No2
Terminal 3: Green (-)	Wire No3
Terminal 4: Blue (-)	Wire No4
Terminal 5: White (-)	Wire No5

Table 2

The maximum / minimum cross section wire that can be connected to the terminals are the following:

Model	**Min / Max Cross Section**
Monochromatic	**2 x 2.5mm² / 2 x 4mm²**
Tunable White	**3 x 1.5mm² / 3 x 4mm²**
RGBW	**5 x 1.5mm² / 5 x 1.5mm²**

Table 3

Power Supply.

- The TERRAGON 80 Series is available with two voltage options, **24VDC and 24~48VDC**, please check the label of the fixture, in order to verify the input voltage.
- In Tunable white and RGBW models the positive pole is common for all channels. Thus, the controller or power supply that is going to be used for these models **must be Common Anode.**
- Dimming can be done by PWM (Pulse Width Modulation) from 100Hz up to 2kHz.
- During the installation of TERRAGON should not be supplied with voltage.

Electrical Connection

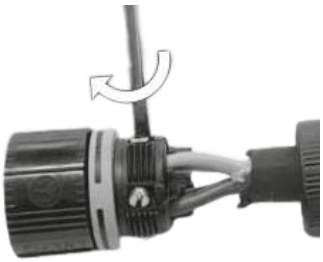
(a)

(b)

Remove the cable connector from the luminaire, by turning counterclockwise, the part marked as red. **(a),** once removed then proceed with the disassembly of the unplugged connector **(b)**

Prepare the cable, that is going to be used.

Cable Diameter Ø 7.00~12.00mm
Insulator removal **(X)**: 20mm
Peeling of the conductor **(Y)**: 6,00mm



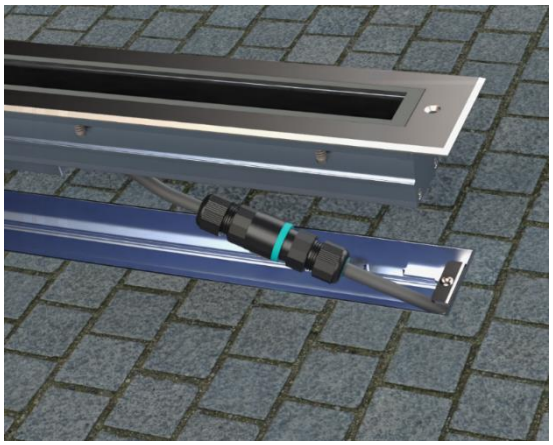
Insert the induvidual conductors into the connector terminal, m ake sure that all the cables are installed and secured correclty.

<u>Attention:</u> Refer to Table 2 for making the connections correctly!

When all the wiring is done then the luminaire can be placed into the mounting box.

Connect the first TERRAGON 80 module to the power supply cable as shown below (a), if more than one luminaire must be installed in the same line (in-out) then the extension cable and IP68 connectors must be used (refer to the catalog page). For the more information about the maximum length that can be achieved, refer to the **TABLE 5.**

(a)



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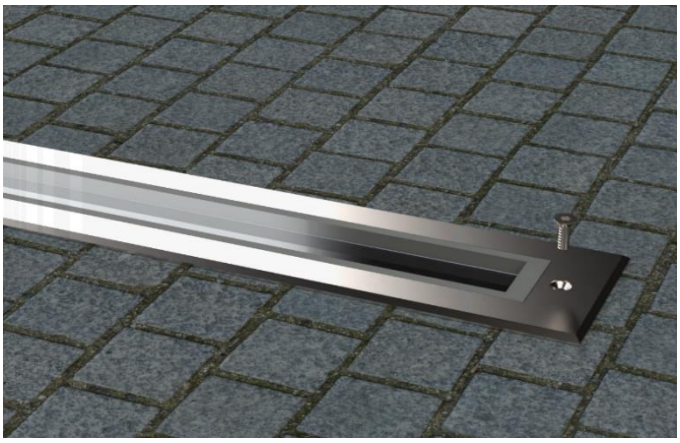

Technical specifications.

Length.	31cm, 56cm, 106cm.
LEDs.	Diffused lighting /Nichia LED. Directional lighting / Samsung LED.
LED / Lenses quantity.	5 @31cm, 10 @56cm, 20 @106cm (for directional lighting).
Lenses.	Φ40mm (PMMA).
Pitch size.	31cm, 56cm & 106cm: 50,00mm.
Beam angle.	8°, 12°, 22°, 45°, 60°, 12°x40°, 15°x50°, 15°x80°, 40°x12°, 50°x15°, 80°x15° degrees.
Dimming.	PWM 24VDC (Diffused models) / PWM 24-48VDC (Directional models).
PWM Range.	0.1kHz – 2kHz.
Ambient temperature.	-25°C / +50°C.
IP rating.	IP68 / IP67 (for adjustable tilt angle models).
Power connector.	IP68 2,3 or 5 poles depending on the model.
Connectors.	PA66 NYLON.
IK rate.	IK10
Protective Cover.	10mm Tempered Low-Iron glass.
Frame.	316 L stainless steel.
Main body.	Powder coated natural anodized anticorodal aluminum EN AW-6060.
Walk Over.	Up to 500kg(5kN).
Maximum Static Load.	Up to 2000kg (20kN).
Input voltage.	24VDC. (Diffused models/ HECP DR models) / 24-48VDC (HE DR models).
Input type.	Common anode (Valid only for multichannel models).
Power consumption. (±4%)	Monochrome Diffused models 31cm, 56cm & 106cm : 15.8W, 31.5W & 63W. Tunable White Diffused models 31cm, 56cm & 106cm : 15W, 30W & 60W. RGBW Diffused models 31cm, 56cm & 106cm : 20.3W, 40.5W & 81W. Directional models 31cm, 56cm & 106cm : 17.5W, 35W & 70W.
Compliance standards.	LVD Directive, EMC Directive.

Table 4

Maximum power of TERRAGON 80 in daisy chain connection.

TERRAGON 80 models offer input - output cabling (available upon request) thus, daisy chain connection can be used. As a result, only the first luminaire has to be power supplied.

When daisy chain connection is in place, the power of each chain should not exceed the values shown in the table below.

TERRAGON 80	Maximum power in daisy chain (Diffused & Constant Power Models).	Maximum power in daisy chain (High efficiency models) *.
Monochromatic 24VDC	Up to 360W	Up to 320W
Monochromatic 48VDC	Up to 720W	Up to 640W
TW & RGBW 24VDC	Up to 280W	Up to 240W
TW & RGBW 48VDC	Up to 560W	Up to 480W

Table 5

***The distance (D) from the power supply to the first fixture must not exceed 5m. For D>5m & D≤10m the maximum power of the daisy chain must be reduced by 30% or you must power supply the output of the last TERRAGON from the same power supply as well (supply both in & out of the daisy chain).**

Note.

In daisy chains it is possible for the luminosity of the first TERRAGON to be different with luminosity of the last one (only in Diffused Models). This happens because of the voltage drop in the power supply cable. To avoid this, you can also supply the output of the last TERRAGON from the same power supply.

The voltage drop only affects the luminosity of Diffused & Standard Directional Models. The luminosity of High Efficiency & Constant power Models is not affected by the voltage drop.