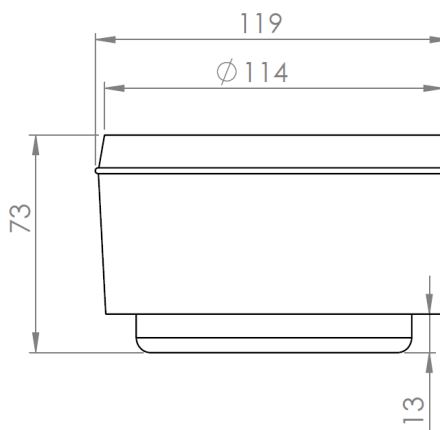


# CRYSTAL STUD PLRE5-MESH-DMX

## DATASHEET



## PRODUCT SPECIFICATIONS

Usage: Solar outdoor marking with no cabling.

Structure: Tempered glass frame thickness 15 mm + aluminum tube.

LEDs' color: Colors RGB + White 4000 K.

CRI of the white LED: minimum 80.

Outflow: 4 lm.

Battery LiFePO4 (3.2 V / 4.5 Ah).

Solar panel Sunpower Back Contact.

Operating temperatures: - 10°C / + 60°C.

Dimensions: 119 x 72 mm.

Weight: 1.25 kg.

Resistance to compression (EN62262 - IK10): 3 tons (suitable for the passage of vehicles of 32 tons maximum).

Class III - IP67 - IK10 - CE.

## AUTONOMY

Battery capacity: 4.5 Ah.

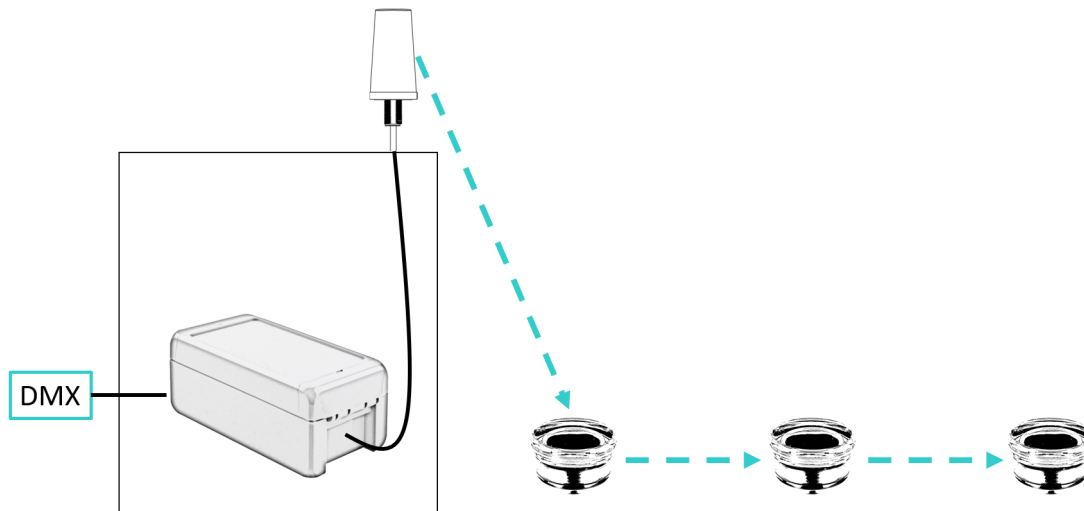
Autonomy: 480 hours.

Embedded intelligence allowing optimal management of the battery according to the environment of the stud for operation 365 nights per year.

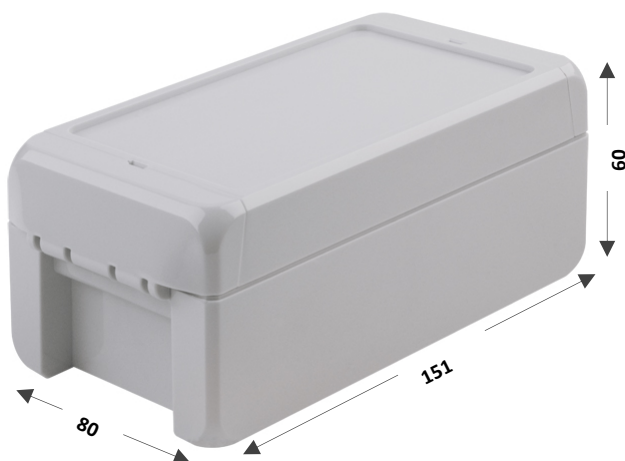
Battery lifespan estimated at 22 years: 8000 cycles for a depth of discharge not exceeding 55 % (this corresponds to 8 hours of use per night in Paris, with 50 % sunshine during the day).

**CONNECTION**

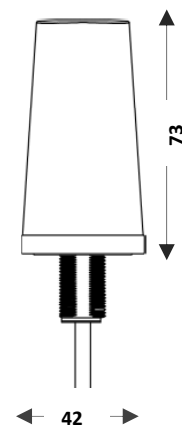
The Nowatt Lighting Gateway makes the link between a DMX system and the Crystal studs PLRE5-MESH.



The Nowatt Gateway receives the scenario sent by DMX. The Gateway antenna sends the scenario to the nearby Crystal studs PLRE5-MESH, then the studs transmit the scenario to each other step by step.



Box



Outdoor antenna

The Nowatt Gateway can fit into a cabinet or into a light pole. It is connected to the DMX network as well as to a power supply. The antenna must be attached to the outside of the pole or the cabinet as close as possible to a Crystal stud PLRE5-MESH.

Entrance:

- 230 V / 50 Hz power supply on connection terminal block via cable gland.
- DMX input on waterproof XLR connector.

**Exit:**

- Remote antenna: height 73 mm x diameter 42 mm.
- Cable length: 2 m.

**Box:**

- Plastic.
- Dimensions: 151 x 80 x 60 mm.
- Weight: 600 g.

Operating temperature: - 20° C / + 70° C.

Class III - IP67 - IK08.

The Gateway requires 10 dedicated DMX channels for Nowatt Lighting studs.

The DMX programming takes place 5 minutes before the start of the scenarios of the PLRE5-MESH.

Mesh communication by radio frequency between the Gateway and the studs, and among the studs: protocol developed by Nowatt in 868 MHz.

Maximum distance between two studs: 5 meters.

## FEATURES

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The Nowatt Gateway allows synchronization among the PLRE5 studs and possibly with a group of wired devices controlled via DMX.

The Crystal studs PLRE5-MESH-DMX all precisely light up at the same time each evening, at the time indicated via DMX.

Each stud knows exactly where it is in the Mesh network, and when and how it should light up during the scenario.

The 10 DMX channels dedicated to the Nowatt Lighting Gateway allow programming of up to 254 different groups of PLRE5-MESH studs.

Each group can contain up to 254 studs all having the same scenario. The studs of the same group light up at the same time, in the same way: same color, same intensity, same light scenario (monochrome, flash, etc.)

A Gateway can drive a maximum of 64,516 Crystal studs PLRE5-MESH-DMX.

The scenario programming should be done by a DMX specialist, after a short training by the technical team of Nowatt Lighting.

Reprogramming is done easily.

Either a programmer comes on site to choose the scenario and modify it when necessary.

Or, if the DMX programmer is equipped with a calendar, the scenarios are pre-recorded for all the nights of the year.

Crystal studs PLRE5-MESH can optionally be used as PLRE4.

See the datasheet of Crystal stud PLRE4.

CAUTION: The use of PLRE5-MESH in a PLRE4 operating mode overwrites any MESH scenario implemented in the Crystal studs.

## LUMINOUS SCENARIO

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The DMX Gateway enables a specific scenario to be sent each evening.

It is possible to make several complex scenarios, different from one another, subject to validation by the Nowatt Lighting technical team.

The ignition can be done either at sunset or at a fixed time.

The shutdown can be done either after a defined operating time or at a fixed time.

Likewise, it is possible to light the studs for a certain period of time before sunrise.

In DMX programming, scenarios are split into 10-minute or 10-minute multiples tranches.

For each tranche, the DMX programmer chooses the color, intensity and type of light scenario (monochrome, flashes, etc.). These parameters can vary independently for each tranche throughout the night.

For example:

- Red flashes for 10 minutes.
- Yellow wave for 1 hour
- Fix blue for 40 minutes
- Etc.

## INSTALLATION

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The methodology for installing Crystal Studs depends on the type of soil.

Please refer to our manual available on request.

## WARRANTY

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Product guaranteed for two years in accordance with the warranties of the French lighting union.