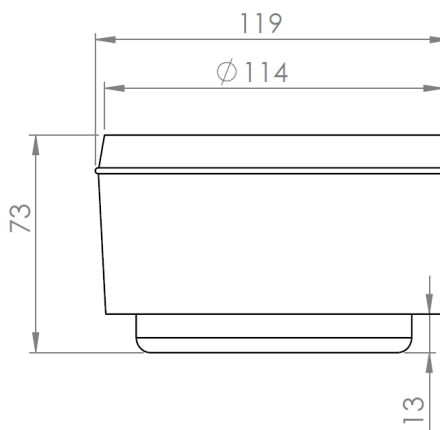# CRYSTAL STUD
PLRE5-MESH SIMPLE

DATASHEET

119
Ø 114
73
13

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

Implementation of the Mesh scenario in the studs:
The setting of the Mesh scenario should be done by the Nowatt Lighting technical team.

Communication among the studs every night during operation:
Mesh communication by radio frequency: protocol developed by Nowatt in 868 MHz.
Maximum distance between two studs: 5 meters.

Crystal studs PLRE5 can optionally be coupled to a DMX Gateway: see technical sheet of Crystal studs PLRE5-MESH-DMX.

FEATURES

Realization of scenarios requiring synchronization among Crystal studs.

The Crystal studs PLRE5-MESH all precisely light up at the same time each evening.
Each stud knows exactly where it is in the Mesh network, and when and how it should light up during the scenario.

The scenarios are developed for each project specifically.
There is no standard scenario.
Start-up of the pre-programmed scenario with the Nowatt Lighting technical team.

Maximum number of studs per scenario: 254 plots.

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

With the PLRE5-MESH-SIMPLE, it is possible to have:
-   1 main scenario for the whole year, which can be complex.
    For example: light wave, chaser, studs that light up or change color one after the other, etc.
-   3 other simple scenarios: a fixed color or monochrome flashes.
    Each of these 3 scenarios can be programmed for ten nights a year (not necessarily consecutive).

Ignition takes place for a defined period of time from sunset or before sunrise.
Switching from one scenario to another happens automatically.
All scenarios must be validated by all stakeholders (customer and Nowatt Lighting) and developed by the Nowatt Lighting technical team before installation.

Reprogramming the studs with a new scenario is possible but should be avoided because it takes a long time to implement.

INSTALLATION

The methodology for installing Crystal Studs depends on the type of soil.
Please refer to our manual available on request.

WARRANTY

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