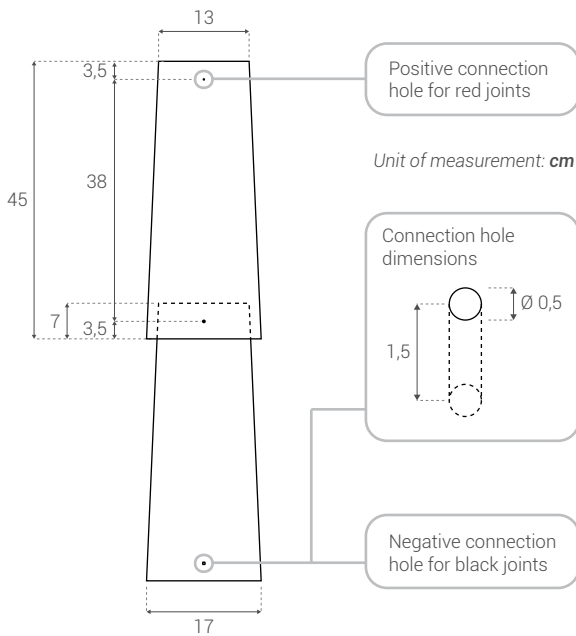




TECHNICAL DATA SHEET

# INVISIBLE SOLAR ROOFTILE

Photovoltaic module shaped like architectural element and made of a polymeric compound, non-toxic and recyclable. The module incorporate monocrystalline silicon cells.



### PLANT SIZING EXAMPLE

This plant sizing is approximate and provides an example for calculation. In any case the plant shall be sized by a technician in accordance with technical specification of the single project.

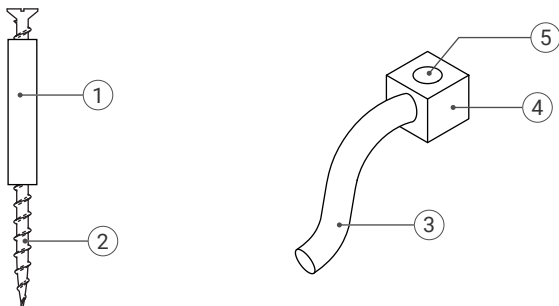
Quantity	Plant Power	Occupied Area
Invisible Solar modules	Kilowatt-peak	Square metres
134	1	9

### Photovoltaic Module

Dimensions	45 x 17 x 13 x H7 cm
Weight	2,00 kg
Working temperature	-40°C / +85°C
Maximum static load	500,00 kg/piece
Protection	IP68
Flammability (self-certification UL 94)	HB
quantity of Invisible Solar modules per square metre	15 pcs/sqm <sup>2</sup>
Net absorbent surface (cells total)	0,0468 m <sup>2</sup>
Operative temperature NOCT	43,5°C
Photovoltaic cells	Monocrystalline silicon



### String connection system



#### Connector

- 1 . Invisible Solar connector
- 2 . Insulated screw for fixing

#### Start/end string joint

- 3 . Photovoltaic cable
- 4 . Polymeric box for connection
- 5 . Hole for connection and attachment

### Electrical Performances

Isc - Short circuit current	3,79 A
Voc - Open circuit voltage	2,56 V
Pp - Peak power	7,57 W
I <sub>mp</sub> - Maximum power current	3,52 A
V <sub>mp</sub> - Maximum power voltage	2,15 V

## Further Information

### Artisan-made product

This product is entirely artisan-made. Electrical performances and color may have some differences between one module and another.

### Certifications

The Invisible Solar modules are innovative and unconventional, they cannot be tested in accordance with standard certification and, currently, it does not exist a specific certification for this kind of product.

For any further clarification, please contact us.

### Disposal and Recycle

When the polymeric compound is brought to a temperature above 600°C, it turns into non-toxic and reusable ashes (for example to make mixture for building materials). The materials that are incorporated into module (such as silicon, backed clay powder, stone and anything else) will be available again for reuse. Copper connection will be melted.

### Measurements

Dyaqua has determined the electrical performances by tests accomplished at Dyaqua's laboratory with 1000 Wm<sup>2</sup> irradiance, 25°C connection temperature and spectral distribution of irradiance AM=1,5.

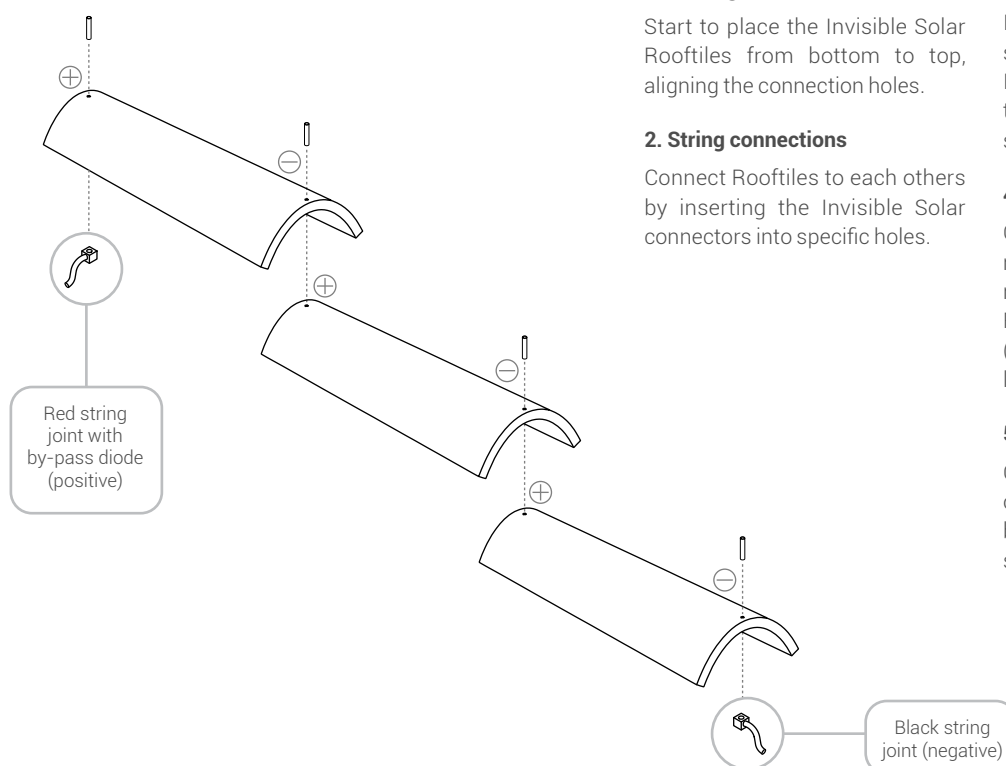
Electrical performances data of the module represent an average value.

### Method for main features determination

Dyaqua has performed the following tests at Dyaqua's laboratory, using equipments that were calibrated on Dyaqua's standards, to determine the technical features of the products.

- 50 cycles of 100°C/h thermal variations with controlled temperature from -40°C to +95°C;
  - 96 hours of salt spray corrosion test;
  - 40 cycle of humidity and freezing in a controlled temperature chamber, with thermal variation from -40°C to +95°C and humidity from 0% a 90%.
- All these tests are periodically repeated on Invisible Solar modules that are randomly selected from manufacturing batches.

## Instruction for Installation



### 1. Placing

Start to place the Invisible Solar Rooftiles from bottom to top, aligning the connection holes.

### 2. String connections

Connect Rooftiles to each others by inserting the Invisible Solar connectors into specific holes.

### 3. Fastening

If necessary, use the insulated screws that are provided with Invisible Solar modules to secure their position to the roof support structure.

### 4. String Joints placement

Connect start/end String Joints to modules. The black joint (negative) must be connected to the first Rooftile, at the bottom. The red joint (positive) must be connected to the last Rooftile, at the top.

### 5. System connection

Connect String Joints with the cable, that lead to accumulation battery or inverter, by using standard photovoltaic connectors.