

# **SOLAR TILES**

## Curved solar roof tile



### Double-glass three-arch curved Solar roof tile.

| Modelling:              | Three-arc curved surface                         |
|-------------------------|--------------------------------------------------|
| Structure:              | Curved ultra -white glass + film + curve d glass |
| Auxiliary materials:    | Edge-protection and EPDM tape                    |
| Size:                   | 721*500*14mm (W*H*D)                             |
| Square meter content:   | 3 pieces/square meter                            |
| Power:                  | 30 watts per pcs                                 |
| Power per square meter: | 90 watts                                         |
| Open circuit voltage:   | 10.6 V                                           |
| Short circuit current:  | 4 A                                              |
| Working voltage:        | 8.6 V                                            |
| Working current:        | 3.5 A                                            |
| Single piece weight:    | 6.5 Kg                                           |

### **CURVED SOLAR TILES**

#### Power your home with hidden PV solar panels.

When conventional solar panels were first being placed on residential rooftops, the world imagined a quick solution for the ongoing energy crisis. But there was a problem: those big flat panels did not match the architectural style of the houses they had to be placed on.

Few people wanted to upset the aesthetics of their roofing just to save a bit on their energy bill in the long term. A solar roof tile on the other hand simply looks like a roof and is highly efficient.

Do solar roof tiles generate as much energy as conventional solar panels?

The solar roof tile not only respects the design of the structure it is placed upon, but it also generates more energy than conventional PV panels.

Since the integrated PV surface is curved by nature, sunlight will always reach the roof tiles at an optimal angle. Using next-generation power optimization and monitoring technologies, energy yields are substantially higher than that of conventional PV panels. Due to the integrated smart electronics, shading issues are a problem of the past.

By integrating this advanced PV system in traditional ceramic, the roof tile truly merges the best of modern technology with the classic.

| Solar roof tiles higher energy yield        | Higher energy yield than conventional systems              |
|---------------------------------------------|------------------------------------------------------------|
| Solar roof tile shadowing effects-          | No negative shadowing effects                              |
| Solar roof tile smart monitoring-           | Smart monitoring of individual tiles                       |
| Solar roof tile obstacle-free installation- | Flexible and obstacle-free installation                    |
| Solar roof tile seamless integration        | Seamless integration in traditional roof                   |
| Solar roof tiles are sustainable            | Lower environmental impact than conventional<br>PV systems |

#### Smart grid & individual monitoring

The performance of the entire system can be monitored through a user-friendly app. Every desired system size is possible. Since solar roof tile can both replace and augment current roof tile models, the product is very easy to install.

Installation is compatible with current roofing procedures and can be carried out by traditional roofers. Having only one party responsible for the installation and repair of the entire roof improves service while lowering installation costs.

Through the smart use of a generic electrical framework that can easily be implemented in different roof tile models, a suitable solution is offered for every architectural style.



Detail of a double-glass three-arch curved Solar roof tile.



An example of a house roof filled with curved Solar roof tiles.

## Flat solar roof tile



| Modelling:                      | Flat tile                                       |
|---------------------------------|-------------------------------------------------|
| Structure:                      | Tempered glass photovoltaic chip tempered glass |
| Auxiliary materials:            | Edge protection and EPDM tape                   |
| Single-chip power:              | Primary color 95W; Red 75W                      |
| Size:                           | 1460*435*21mm (W*H*D)                           |
| Primary color monolithic power: | 95 watts                                        |
| Power per square meter:         | 159 watts                                       |
| Open circuit voltage:           | 30.1 V                                          |
| Short circuit current:          | 4.05 A                                          |
| Working voltage:                | 26.24 V                                         |
| Working current:                | 3.81 A                                          |
| Red monolithic power:           | 75 watts                                        |
| Power per square meter:         | 119 watts                                       |
| Open circuit voltage:           | 28.9 V                                          |
| Short circuit current:          | 3.2 A                                           |
| Working voltage:                | 25.2 V                                          |
| Working current:                | 2.98 A                                          |
| Single piece weight:            | 12 Kg                                           |

## **FLAT SOLAR TILES**

Solar tiles are one of the sources of green energy that performs two jobs at the same time, as it is a roof tile and a sustainable source of energy. This, in turn, contributes to reducing the cost when building the roof and reducing labor costs.

Solar tiles are considered one of the sources of investment in energy for the user, unlike regular tiles, which in turn are a used material without a continuous benefit. Solar tiles are installed on the roofs of houses and buildings, and in turn, they provide electricity even on cloudy days.

Solar tiles are considered one of the sources of energy that works even in the worst weather conditions, as it is waterproof and snow-proof. In reality, the only building material with a return on investment is a building-integrated solar tile roof.

Solar tile roofs will not only pay for themselves but will also generate additional cash for you. Solar tile roofs are an excellent solution for homeowners who want to incorporate solar energy into their daily lives. Thin-film solar technology enables cutting-edge features such as flexibility, lightweight, superior low-light performance, and diversified colors and shapes. These unique qualities make it adaptable to a wide range of applications, including Building Integrated Photovoltaics (BIPV), and residential power.





Completed installation of Flat tiles on house roofs.

An example of an on-going installation of Flat solar tiles on a house roof.