

eterbright®



Product brochure

ePower Tile

www.eterbright.tw



BIPV trend

The European PV market has experienced robust expansion. The year 2018 brought 11GW of new installations in Europe itself and achieved growth of 20% compared to 2017. The forecasts for 2019 are equally optimistic.

In residential areas, the market will benefit greatly from EU regulations for passive housing. In short, the newly constructed buildings would have to meet the strict requirements of energy efficiency.

In reality, the only way to meet these conditions is solar energy. Although already popular, PV will become the standard.

As a result, the integrated systems will gain in importance, which is already noticeable in the countries like the Netherlands, Switzerland, Germany and Sweden.

Eterbright with the advanced thin film, is well positioned to deliver the high-end BIPV products. Eterbright provides a bridge between the industries of architectural design and renewable energy, merging and revolutionizing them so that the future can be both functional and beautiful. While the silicon BIPV is just a compromise, thin film solutions represent real value-added for the architects.

Our CIGS leaves the space to maneuver with the tilt angle, sizing and colors of the modules. The replacement of the traditional construction materials is within the reach.

20%

Growth rate of the PV market in Europe

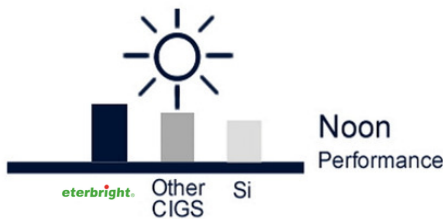
2020

Introduction of EU regulations for energy-efficient housing

BIPV

Accelerated growth of integrated PV in the residential segment

CIGS TECHNOLOGY



High performance in low light conditions

The crucial advantage of CIGS over silicon technology. For most locations in Europe, the dimmed and scattered light is the reality for most time of the year.



Aesthetics

Outstanding look without compromise allows the thin film to be at the top of the BIPV segment.



Low shade effect

Residential and BIPV installations are rarely perfectly positioned. With CIGS, the shadows of trees, chimneys or other buildings pose a small threat to the overall yield and durability of the modules.



Mechanical load

Mechanical properties that meet the stringent requirements of the construction industry.

Non-toxic

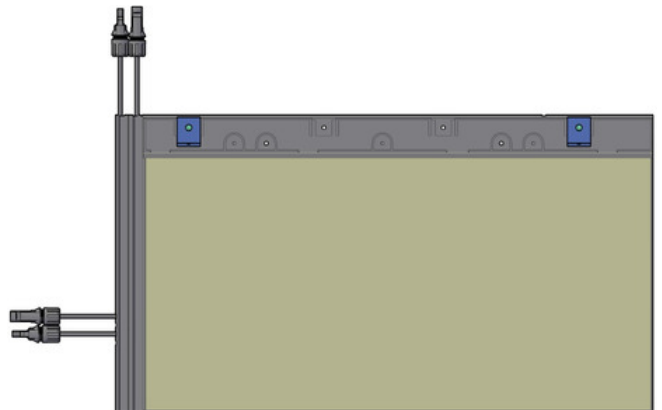
Eterbright owns the RoHS certificate as a single brand in the European market and offers zero cadmium and lead modules.

Cadmium Free

Product information

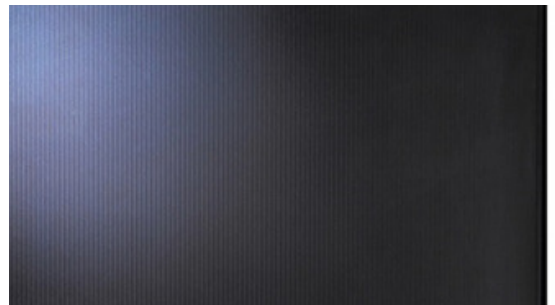
28Wp

Rated power STC
of the individual ePower Tile



140Wp

Highly efficient CIGS cells
deliver 140Wp from
each m² of the roof surface



4.5kg, 5400Pa

Lightweight roof tiles win
the market through easy
installation and lower load
on the roof structure.

672x372x37mm

The total size of the tile
including the fiberglass carrier.

636x317mm

The size of the exposed CIGS area
responsible for power generation.

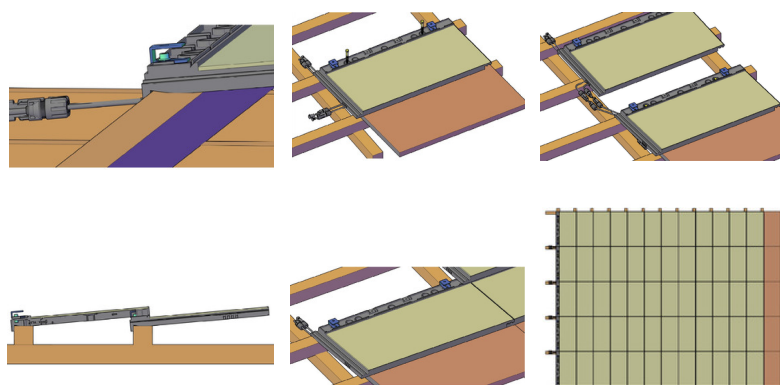
**25 years output warranty
under STC conditions**

EMC, LVD, IEC, RoHS



Installation process

Simplicity and versatility



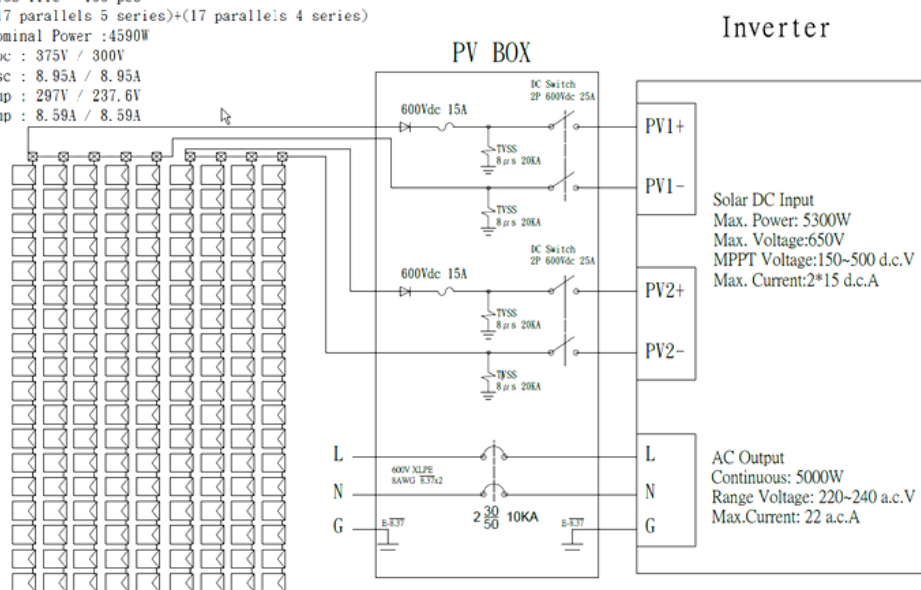
The ultimate idea of ePower Tiles is to replace the traditional roofing. To achieve this, the installation should be kept just as simple. This is the case for the Eterbright system.

Due to the inherent properties of CIGS, our ePower Tiles exhibit low sensitivity to such factors as imperfect tilt angle and roof orientation or shading risk. Versatility becomes crucial under the European conditions.

ePower Tile system design

Example of a 4.5 kWp system

CIGS-Tile * 153 pcs
(17 parallels 5 series)+(17 parallels 4 series)
Nominal Power :4590W
Voc : 375V / 300V
Isc : 8.95A / 8.95A
Vmp : 297V / 237.6V
Imp : 8.59A / 8.59A



Parallel string

Series string

Yield

To meet the voltage conditions of the inverter, the tiles are first switched into a parallel chain. The maximum current is 12A.

In the next step, the parallel strings are connected in series so that the voltage remains at about 600V.

The annual yield of such a plant would reach 4500 kWh in northern Europe and up to 6000 kWh in the south. This amount is enough for the average household need. In the coming years, the energy storage systems and the EV would only increase the utility value of the installation.

Safety

The Eterbright ePower Tile system complies with EU safety standards, which is reflected in the required certification of the product. The system provides full protection against rain, wind and snow.

