

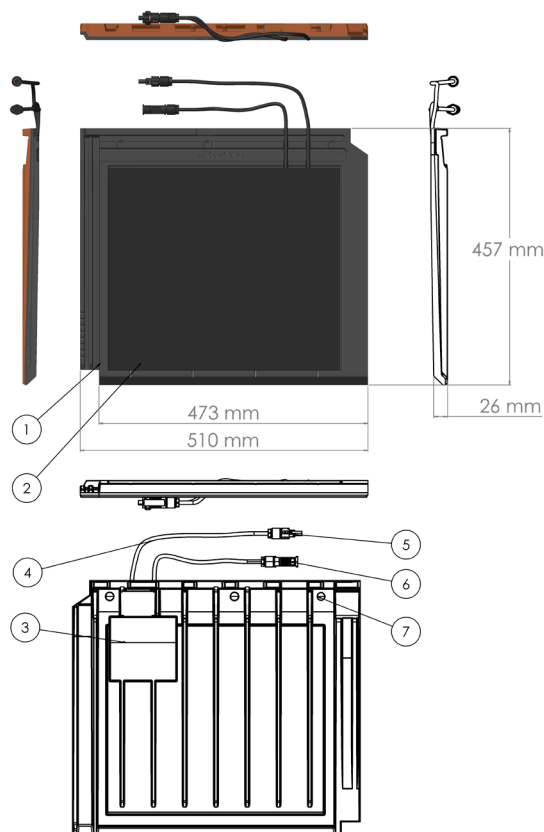


Roof & Plug

SOLAR FLAT-5XL Ceramic Roof Tile CIGS

SOLAR Flat-5XL ceramic roof tiles are the only large ceramic tiles with an **integrated solar energy system**. They are ideal for providing a reliable supply of solar energy. Thanks to the integration of the solar panel into the tile, the tiles provide all the benefits of a roof made from ceramic tiles in terms of watertightness, without any risk of deterioration or oxidation.

Durability and performance over time is reinforced by the structure of the product itself and the use of glass-glass panel (double tempered glass) that ensures a durable and watertight encapsulation.



Key box:

- 1 - Flat-5XL ceramic support
- 2 - Photovoltaic panel
- 3 - Junction box ceramic housing
- 4 - Connection cables
- 5 - MC4 connector (+) positive terminal
- 6 - MC4 connector (-) negative terminal
- 7 - Holes for fixing to the batten*

* Requires 2 screws for fixing to the batten (per solar tile unit): diameter from 3,5 to 4,2 / thread length 45 - 55 mm, depending on the batten type.

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Characteristics: SOLAR FLAT-5XL Ceramic Roof Tile - CIGS

Dimensions:	457 x 510 mm
Individual weight:	7,50 kg.
Finish:	LEON MATTE / CRISTAL FULL-BLACK
Cell type:	CIGS (free from Cd and Pb) ⁽¹⁾
Base:	Flat-5XL ceramic roof tile
Fixing system:	3 pre-drilled holes (batten fixing – min. 2 places)
Panel dimensions:	410 x 360 mm (380 x 300 mm useful area)
Equivalence to ceramic tiles:	1 Flat-5XL roof tile
Placing:	Depending on the Flat-5XL roof tile *
Connection:	Mixed (series – parallel)
Maximum power (P_{max}):	17 Wp
Maximum power tolerance:	-3% / +5 %
Maximum power current (I_{mpp}):	0,54 A
Maximum power voltage (V_{mpp}):	31,7 V
Short circuit current (I_{sc}):	0,61 A
Open circuit voltage (V_{oc}):	40,2 V

Temperature coefficient of P_{max} (δ):	-0,34 %/K
Temperature coefficient V_{oc} (β):	-0,24 %/K
Temperature coefficient I_{sc} (α):	+0,01 %/K
Maximum system voltage:	1.000 V (IEC)
Maximum series fuse rating (I_{gr}):	5 A
Operating temperature:	-40 °C a 85 °C.
Standard**:	IEC 61646 - IEC 61730
Front glass panel:	3,2 mm. tempered glass
Backsheet:	1,8 mm. tempered glass
Junction box:	IP 67
Connectors:	MC4 or compatible connectors
DC cable:	4,0 sq. mm., (12 AWG)
DC cable length:	2 x 600 mm
Units /sq. m.:	5,85 – 5,50 uds
Maximum power/sq. m.***:	102 Wp/sq. m.
sq. m. – 1 kWp:	9,8 sq. m.
Units/kWp:	58,82 units

All measurements are approximate.

Note: The SOLAR FLAT-5XL roof tile has an entirely black (FULL-BLACK), anti-reflective finish, with none of the typically visible connections. It is entirely compatible with the FLAT-5XL ceramic tile (see available finishes on the Tejas Borja website).

* SOLAR Flat-5XL Ceramic Tile must always be installed on ventilated roofs using a double batten system or equivalent.

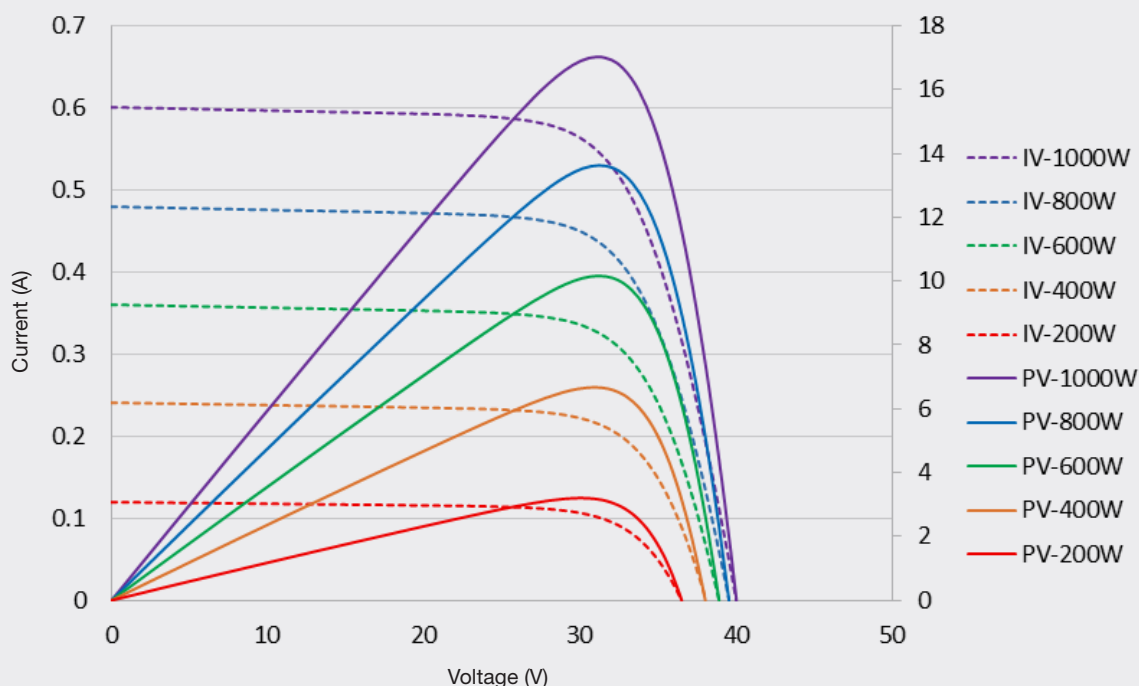
** The certification process is pending.

*** Depending on batten spacing.

STC standard conditions: irradiance = 1,000 W/sq. m.; cell temperature = 25°C; AM = 1,5.

⁽¹⁾ CIGS (copper, indium, gallium and selenium) is an acronym which describes the latest development in high efficiency solar cell technology (this technology is the most effective in shady conditions) providing high performance while free from cadmium and lead.

Voltage curve I-V and P-V curves at different irradiance levels.



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