



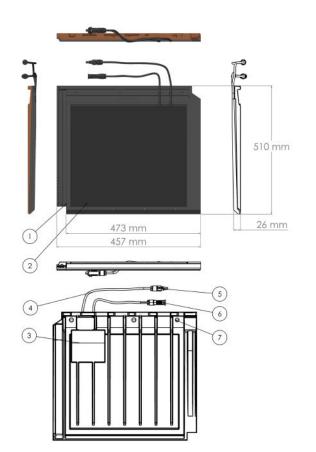
# SOLAR FLAT-5XL Ceramic Roof Tile MONOCRYSTALLINE (V. M2G)

### 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.

The perfect integration is completed with the **FLAT-5XL ceramic roof tiles** and their clay accessories in the installation of the roof or facade.





#### 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 - MONOCRYSTALLINE (v. M2G)

Dimensions:	457 x 510 mm
Individual weight:	7.50 kg.
Finish:	LEON MATTE / CRISTAL FULL-BLACK
Cell type:	Monocrystalline
Base:	Flat-5XL ceramic roof tile
Fixing system:	3 pre-drilled holes (batten fixing – min. 2 places)
Panel dimensions:	410 x 360 mm (320 x 360 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 <sub>max</sub> ):	23 Wp
Maximum power tolerance:	-5% / +5 %
Maximum power current (I <sub>mpp</sub> ):	1.61 A
Maximum power voltage (V <sub>mpp</sub> ):	14.30 V
Short circuit current (I <sub>sc</sub> ):	1.79 A
Open circuit voltage (V <sub>oc</sub> ):	16.80 V

Temperature coefficient of $P_{max}$ ( <b><math>\delta</math></b> ):	-0.38 %/K
Temperature coefficient $V_{_{oc}}$ ( $\beta$ ):	-0.35 %/K
Temperature coefficient $I_{sc}$ ( $\alpha$ ):	+0.07 %/K
Maximum system voltage:	600 V (IEC)
Maximum series fuse rating $(I_{sf})$ :	3 A
Operating temperature:	-40 °C a 85 °C.
Standard**:	IEC 61646 - IEC 61730
Front glass panel:	3.2 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 470 mm
Units /sq. m.:	5.85 – 5.50 units
Maximum power/sq. m.***:	140.4 Wp/sq. m.
sq. m. – 1 kWp:	7.43 sq. m.
Units/kWp:	43.48 units

All measurements are approximate.

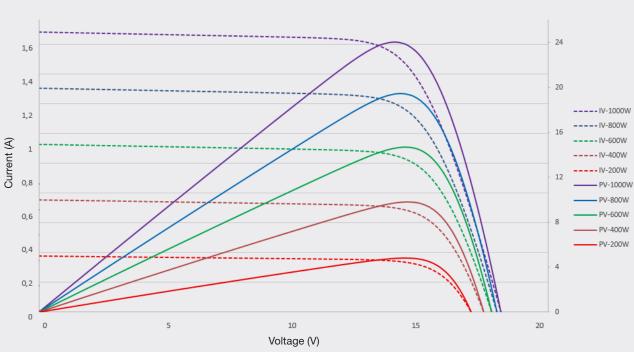
Note: The SOLAR FLAT-5XL roof tile has an entirely black (FULL-BLACK), anti-reflective finish, with none of the typically visible connections. It is entirely compatible with the FLAT-5XL ceramic tile

(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.

STC standard conditions: irradiance = 1,000 W/sq. m.; cell temperature = 25°C; AM = 1.5.



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

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