



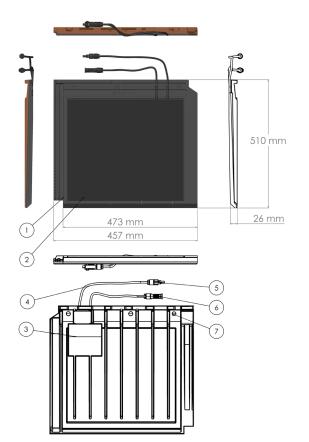
SOLAR FLAT-5XL Ceramic Roof Tile MONOCRYSTALLINE

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*

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Technical data can be modified at any time without prior notice. Possible errors are not ruled out. Always check the latest version on the website.

^{*} 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.

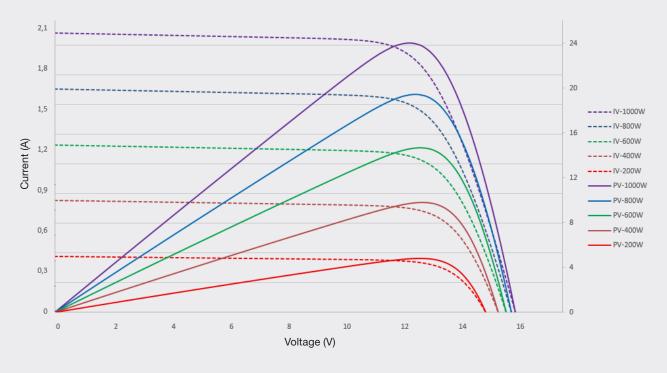
Characteristics: SOLAR FLAT-5XL Ceramic Roof Tile - MONOCRYSTALLINE

Dimensions:	457 x 510 mm	Temperature coefficient	-0.38 %/K
Individual weight:	7,50 kg.	of P _{max} (δ):	
Finish:	LEON MATTE / CRISTAL FULL-BLACK	Temperature coefficient $V_{_{oc}}$ (β):	-0,30 %/K
Cell type:	Monocrystalline		0.040.0/ ///
Base:	Flat-5XL ceramic roof tile	Temperature coefficient I _{sc} (α):	0,043 %/K
Fixing system:	3 pre-drilled holes	Maximum system voltage:	600 V (IEC)
Tixing system.	(batten fixing – min. 2 places)	Maximum series fuse rating (I _s):	5 A
Panel dimensions:	410 x 360 mm (320 x 360 mm useful area)	Operating temperature:	-40 °C a 85 °C.
Equivalence to ceramic tiles:	1 Flat-5XL roof tile	Standard**:	IEC 61646 - IEC 61730
Placing:	Depending on the Flat-5XL roof tile *	Front glass panel:	4 mm. tempered glass
Connection:	Mixed (series – parallel)	Backsheet:	Combination of polymers
Maximum power (P _{max}):	24 Wp	Junction box:	IP 67
Maximum power tolerance:	-5% / +5 %	Connectors:	MC4 or compatible connectors
Manipular and the No.	100	DC cable:	4,0 sq. mm., (12 AWG)
Maximum power current (I _{mpp}):	1,9 A 	DC cable length:	2 x 470 mm
Maximum power voltage (V _{mpp}):	12,75 V	Units /sq. m.:	5,85 – 5,50 units
Short circuit current (I _{so}):	2,05 A	Maximum power/sq. m.***:	143,26 Wp/sq. m.
		sq. m. – 1 kWp:	6,98 sq. m.
Open circuit voltage (V_a):	15,16 V	Units/kWp:	41,32 units

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 Teias Boria website).

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

^{***} Depending on batten spacing.
*** The certification process is pending.