



Product	SOLAR FLAT-5XL 23 Wp
Manufacturer	TEJAS BORJA S.A.U. (Edilians Group)
Made in	Spain (Valencia)
Type	Large-format SOLAR tile with a flat ceramic base, lateral interlocking, and variable head overlap.
Applications	Pitched roofs and vertical surfaces
Installation	On battens or an equivalent system with support from lower lugs. Mechanical (dry) fixing, according to Technical Building Code, through the pre-marked holes. In combination with the Flat-5XL ceramic tile. From right to left, in line or staggered.



MAIN CHARACTERISTICS OF SOLAR FLAT-5XL | 23 Wp

Dimensions	457 x 510 (mm) 17.99 x 20.08 (inch)
Useful length (batten distance)	370 ~ 385 (mm) 14.57 ~ 15.16 (inch)
Useful width	475 (mm) 18.70 (inch)
Unit weight	7.5 kg 16.53 lb
Tiles per m²	5,46 - 5,68 uds./m ² 0.507 - 0.528 units/ sq.ft
Weight per m²	40,95 - 42,6 kg/m ² 8.39 - 8.73 lb/sq.ft
Minimum recommended slope	30% – 17° (*)
Pallet data	36 units
Finish	LEON MATTE / CRISTAL FULL-BLACK
Cell type	Monocrystalline
Support	Flat-5XL ceramic base
Panel dimensions	410 x 360 x 4.5 (mm) 16.14 x 14.17 x 0.18 (inch)
Active panel area	385 x 315 mm 15.16 x 12.40 (inch)
Equivalence to ceramic tiles	1 FLAT-5XL roof tile
Installation	According to FLAT-5XL roof tile
Front side	3.2 mm tempered glass 0.13 inch
Back side	Ceramic

Approximate values. The values of the roof tile dimensions admit a tolerance of ±2% according to UNE-EN 1024.

Before installation, it is necessary to determine the useful length on site. It must be installed in compliance with the UNE EN-136020 standard for the design and assembly of roofs with ceramic roof tiles and the Tejas Borja specifications.

* In zone 1, in a protected area, it should be laid in staggered staggered pattern with waterproof sheeting and a 355 mm batten step, in an up to 6.5 m skirt. Consult the table of minimum slopes depending on the length of the roof and the geographical area (Standard UNE-136020).

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.

SOLAR FLAT-5XL | 23 Wp SPECIFICATIONS

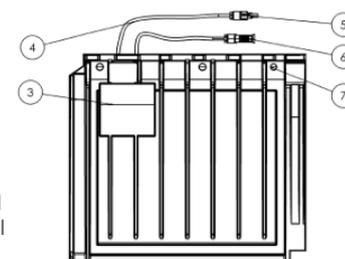
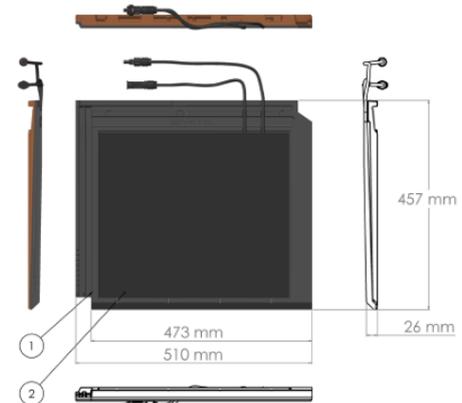
Power per m² ft²	126 ~ 131 Wp/m ² 11.71 ~ 12.17 Wp/sq.ft
Area for 1 kWp	7.63 ~ 7.93 m ² 82.13 ~ 85.36 sq.ft
Units per 1 kWp	43.5 units
DC Cable Length	2 x 470 (mm) 2 x 18.50 (inch)
DC Cable	4.0 mm ² 12 AWG
Connector Plug	MC4 Compatible
Junction Box	IP67
Standards	CE, IEC 61646 - IEC 61730**
Warranty	10 years PRODUCT 25 years PERFORMANCE at 80%

** Certification reference: SM G-20W.

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.



Technical data can be modified at any time without prior notice. Possible errors are not ruled out.

ALWAYS REFER TO THE LATEST VERSION OF THE DATA SHEET ON THE WEB SITE.

SOLAR FLAT-5XL | 23 Wp ELECTRICAL CHARACTERISTICS

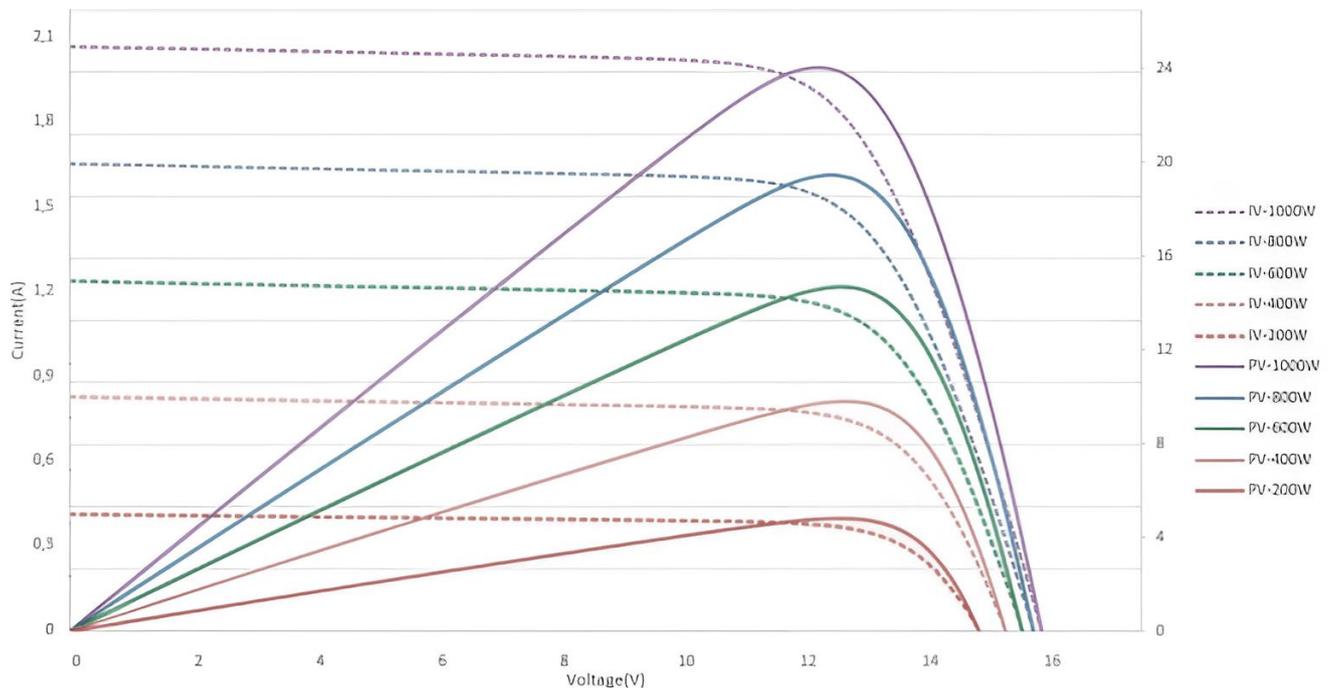
Peak Power (P_{max})	23 Wp
Output power tolerance	-5% / 5 %
Current at Nominal Power (I_{mpp})	1.78 A
Voltage at Nominal Power (V_{mpp})	13.20 V
Short-Circuit Current (I_{sc})	1.92 A
Open-Circuit Voltage (V_{oc})	15.5 V
Cell Efficiency	22.7%
Maximum System Voltage	600 V (IEC)
Temperature Coefficient P_{max} (δ)	- 0.38 % K
Temperature Coefficient V_{oc} (β)	- 0.36 % K
Temperature Coefficient I_{sc} (α)	+ 0.07 % K
Max. System Fuse Rating (I_{st})	3 A
Operating Temperature	-40°C ~ 85°C

Standard Conditions STC: Irradiance 1,000 W/m², Cell Temperature: 25°C, AM=1.5



VOLTAGE CURVE

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



COMPATIBILITY



Dimensions	457 x 510 (mm) 18 x 20.1 (inch)
Length exposure	340 - 385 (mm) 13.4 - 15.2 (inch)
Width exposure	475 (mm) 18.7 (inch)
Roof tiles / ml eaves	2 pcs./lm 0.61 pcs./ft
Unit weight	6.55 kg/pc 14.4 lb/pc
Performance	5,48 pcs./sq.m. 51 pcs./square
Weight per sq.m.	35.89 kg/sq.m. 735.1 lb/square
Min. recommended slope	30° - 17° 6:21 (*)

Approximate values. The values of the dimensions of the roof tiles admit a tolerance of ±2% according to UNE-EN 1024. Consult finishes and technical specifications on the website.

