

Data sheet Blackline





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F10-U Blackline 9W Solar Roof Tile

The F10-U Blackline 9W Solar Roof Tile is based on the existing roof tile model Nibra F10Ü Flachdachziegel. Actual documentation of the Nibra F10Ü Flachdachziegel is available at Nelskamp.de. The F10-Ü Blackline 9W Solar Roof Tile is currently available in two colours: Black Engobe (colour code 232) and Black Noble Engobe (colour code 218).

Technical specifications

Maximum power	9W
Output tolerance	+ 0/5%
Optimum operating voltage	1.06V
Optimum operating current	8.51A
Open circuit voltage	1.28V
Short Circuit Current (Isc)	8.99A
Maximum system voltage	1000VDC
Temperature coefficient voltage	- 0.34±0.02%/° C
Temperature coefficient current	+ 0.06 ± 0.01%/°C
Temperature coefficient power	- 0.5 ± 0.05 %/°C

Maximum values

Temperature resistance	-40 °C ~ +80° C
Storage temperature	-40 °C ~ +80° C
Maximum allowed voltage insulation	1000VDC
Maximum wind resistance	60 m/s
Maximum surface load	200kg/m ²
Maximum hail load	25 mm / 80 km

Mechanical specifications

Dimensions roof tile	487 x 296 mm
Covering width roof tile	242 mm +/- 1mm
Tile lath distance	419-428 mm
Weight	4.8 kg
Weight per m ²	48 kg
Number per m ²	10 stuks
Minimum roof pitch	15°/22°

General data

Solar cell type	mono-crystalline silicon
Dimensions cell	156x156 mm
Shape of cell	square
5 bush bars	black
Number of cells	2 series
Efficiency of cell	20,22%

Laminate data

Dimensions l x w x d	340x172x4,5
Material frame	none
Surface glass	hardened solar glass
Glass thickness	3.2 mm
Material	EVA
Material backsheet	TPT

STC data

AM-condition AM	1.5
Light intensity	1000 W/m ²
Temperature	25° C

Packaging

Number per pallet	180
Dimensions full pallet	100x120
Weight full pallet	850kg