



Power range:
450 Wp



Positive tolerance:
from 0 to +3 Wp



Optimization of raw materials



Thermal characteristics:
NOCT 43°C



Frame:
anodised standard aluminium



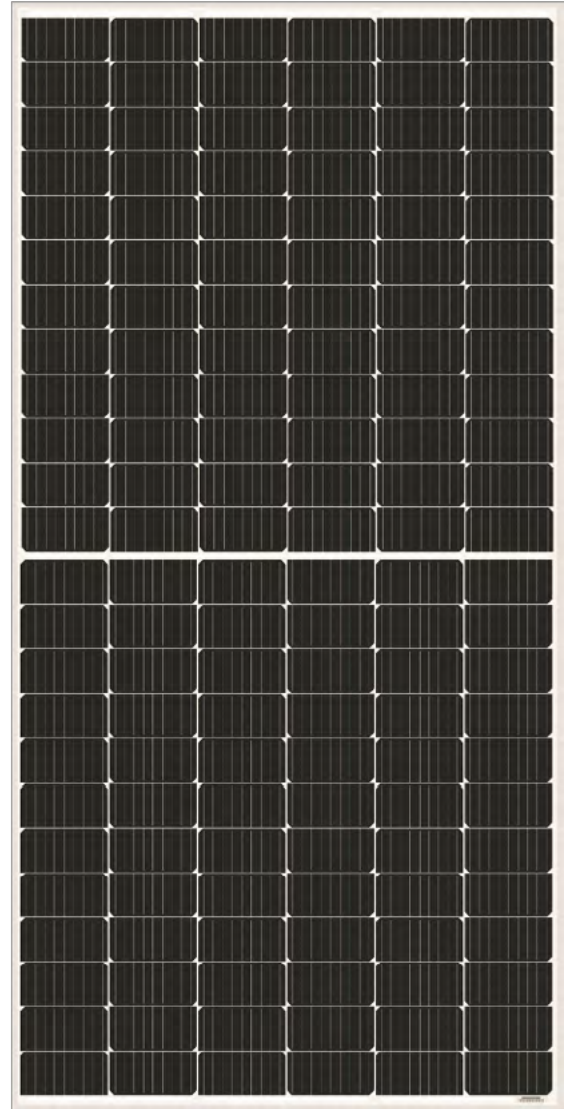
Fire resistance:
class of reaction to fire 1 (UNI 9177)



Warranty:
12 year against manufacturing defects



Cell:
9BB "Half Cut" Monocristallina, 166x83mm



Specifications

- Use of tempered glass anti-glare with low iron content and high quality for optimum light collection.
- Anodised aluminium frame which provides solidity and sturdiness to withstand constant loads and climatic stresses such as snow and ice with applied pressure max 5,4kN/m²
- NOCT = 43°C
- Temperature range from -40°C a 85°C
- Mechanical load on surface max 550 kg/m²
- Hail impact resistance ø 25mm a 86 km/h

System certifications

- Corporate Quality Management EN ISO 9001:2015
- Environmental Management EN ISO 14001:2015
- Management of Health and Safety at the Workplace BS/OHSAS 18001:2007
- Certificates issued by ASACERT Assessment & Certification

Product certifications

- IEC 61215:2005
- EN 61730-1/-2:2007
- Class of reaction to fire I (UNI 9177)
- Safety class II
- Factory Inspection
- Production "Made Extra EU"
- EC Directives: EMC 2004/108/EC; 2006/95/EC low Voltage

Measures

VE472PV

• Length	2102	mm
• Width	1040	mm
• Height	35	mm
• Weight	24	kg
• Glass thickness	3,2	mm

Guarantees

- 12 year warranty against manufacturing defects*
- 30 year linear warranty to 85% of the maximum declared power*

*If used and installed according to technical and operational instructions. The Company reserves the right to make changes to product specifications. This data sheet corresponds to the requirements of Standard EN50380. Rel.1 11/2021

Behavior in standard test conditions STC*

Power class (maximum value)	P_{max}	450 Wp
Efficiency	η	20,60 %
Open-circuit voltage	V_{oc}	50,20 V
Short-circuit current	I_{sc}	11,28 A
Maximum power voltage	V_{mp}	41,80 V
Current at maximum power	I_{mp}	10,77 A

* Note - Under standard conditions: Irradiation 1000 W/mq - Module temperature = 25°C - Air mass AM 1,5
Measurement tolerance solar simulator class A (- / + 3%)

Materials used

Cells per module	144
Cell type	9BB Monocrystalline PERC
Cell size	166 mm x 83 mm
Front side	Tempered glass (EN 12150)

Parameters for optimal integration into the system

Maximum system voltage class II	1500 V
Load capacity of reverse current	20 A
High snow loads (standard IEC 61215)	max 5,4 kN/m²
Number of bypass diodes	3

Thermal characteristics

NOCT**	43 +/- 2°C
TC I_{sc}	0,05 %/°C
TC U_{oc}	-0,28 %/°C
TC P_{mpp}	-0,36 %/°C

**Note - Under NOCT conditions: Irradiation 800 W/mq - Module temperature = 43°C - Air mass AM 1,5

More Info

Sorting tolerance P_{max}	0/+3 W
Type of protection (IP)	IP68
Connector	MC4
Cable	4mm² - Length 0,3m

