



System certifications

- Corporate Quality Management EN ISO 9001:2008
- Environmental Management EN ISO 14001:2004
- Management of Health and Safety at the Workplace BS/OHSAS 18001:2007
- Certificates issued by TÜV Rheinland ID:9105069414

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 in EU"
- EC Directives: EMC 2004/108/EC; 2006/95/EC low Voltage
- Disposal and recycling at end-of-life of modules: adherence to COBAT

Guarantees

- 10 year warranty against manufacturing defects*
- 10 year warranty on 90% of the maximum declared power*
- 25 year warranty on 80% of the maximum declared power*

*If used and installed according to technical and operational instructions. V-energy reserves the right to make changes to product specifications. This data sheet corresponds to the requirements of Standard EN50380. Rel. 3 06/2014

When quality is synonymous with adaptability!



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 = 40,6°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

Measures

	4x9	6x6
• Length	1495 mm	1019 mm
• Width	682 mm	998 mm
• Height	35 mm	35 mm
• Weight	13,5 kg	13,5 mm
• Frame	Anodized aluminium (possibility of SEASIDE QUALICOAT)	
• Glass thickness	3,2 mm	3,2 mm

Behavior in standard test conditions STC*

Power class (maximum value)	P_{max}	145 Wp
Efficiency	η	14,22 %
Open-circuit voltage	V_{oc}	22,41 V
Short-circuit current	I_{sc}	9,03 A
Maximum power voltage	V_{mp}	17,02 V
Current at maximum power	I_{mp}	8,53 A

* Note - Under standard conditions: Irradiation 1000 W/mq - Module temperature = 25°C - Air mass AM 1,5
Measurement tolerance solar simulator class A (- / + 2%) in accordance with IEC 60904-9

NOCT conditions behavior**

Power class (maximum value)	P_{max}	107,2 Wp
Open-circuit voltage	V_{oc}	20,53 V
Short-circuit current	I_{sc}	6,81 A
Maximum power voltage	V_{mp}	16,34 V
Current at maximum power	I_{mp}	6,56 A

**Note - Under NOCT conditions: Irradiation 800 W/mq - Module temperature = 40,6°C - Air mass AM 1,5

Materials used

Cells per module	36
Cell type	3BB Polycrystalline
Cell size	156 mm x 156 mm
Front side	Anti-glare tempered glass (EN 12150)

Thermal characteristics

NOCT	40,6 +/-2°C
TC I_{sc}	3,1857 mA/°C
TC U_{oc}	-0,1192 V/°C
TC P_{mpp}	-0,40 %/°C

Parameters for optimal integration into the system

Maximum system voltage class II	1000 V
Load capacity of reverse current	15 A
High snow loads (standard IEC 61215)	max 5,4 kN/m ²
Number of bypass diodes	2 (VE136PV 4x9) / 3 (VE136PV 6x6)

More Info

Sorting tolerance P_{max}	0/+4,99 W
Type of protection (IP)	IP65
Connector	MC4
Cable	Solar cable 4mm ² - Length 1m

