



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

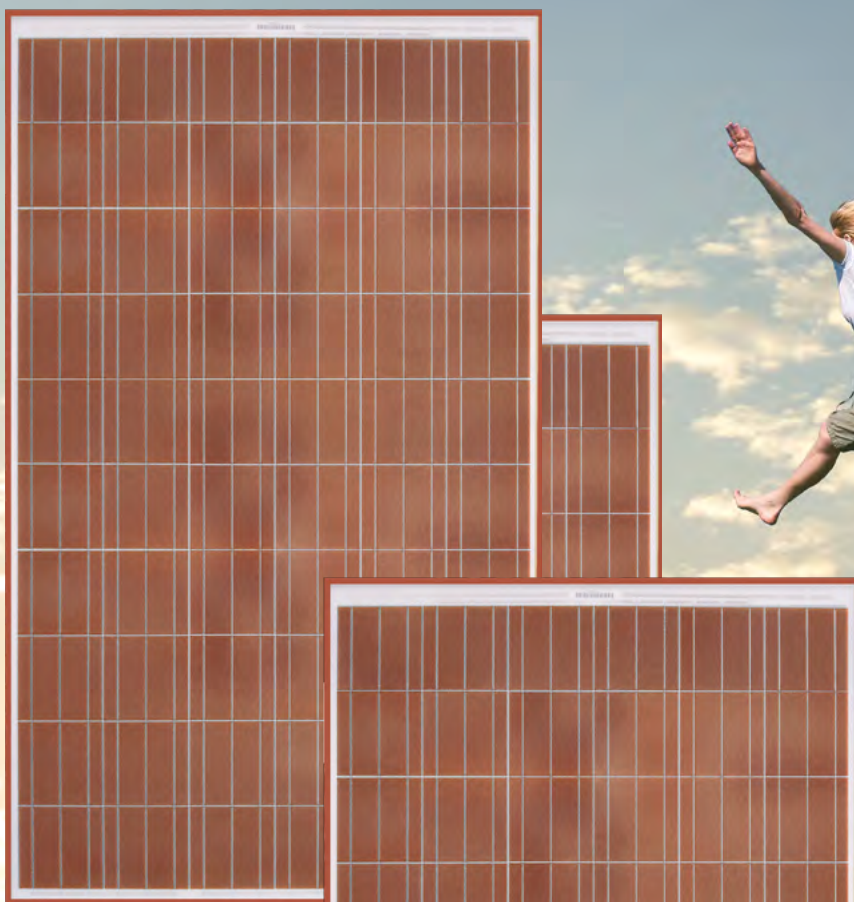
- IEC 61215:2005
- EN 61730-1/-2:2007
- Class of reaction to fire I (UNI 9177)
- Safety class II
- Factory Inspection
- Production "made in EU"
- EC Directives: EMC 2004/108/EC; 2006/95/EC low Voltage
- Disposal and recycling at end-of-life of modules: adherence to COBAT

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. 5 06/2014

You can put them anywhere. Without limits or constraints.



Photovoltaic modules VE160PVMR Maple Red from V-energy products integrate seamlessly in any environment.

Their technical and aesthetic features ensure overcoming constraints and landscape limitations in historical centres.

Moreover, their high quality "Made in Italy" is certified and guaranteed for 10 years.

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 = 44,5°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

Measure VE160PVMR Eco Maple Red

• Length	1650	mm
• Width	990	mm
• Height	35	mm
• Weight	18,5	kg
• Frame	Anodized or painted aluminium	
• Glass thickness	3,2	mm

Behavior in standard test conditions STC*

Power class (maximum value)	P _{max}	230 Wp	235 Wp	240 Wp	245 Wp	250 Wp
Efficiency	η	14,08 %	14,39 %	14,69 %	15,00 %	15,31 %
Open-circuit voltage	V _{oc}	37,33 V	37,51 V	37,57 V	37,65 V	37,73 V
Short-circuit current	I _{sc}	8,41 A	8,44 A	8,55 A	8,65 A	8,75 A
Maximum power voltage	V _{mp}	29,66 V	29,92 V	30,38 V	30,42 V	30,45 V
Current at maximum power	I _{mp}	7,84 A	7,89 A	7,93 A	8,09 A	8,24 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}	168,2 Wp	174,02 Wp	178,6 Wp	182,9 Wp	186,2 Wp
Open-circuit voltage	V _{oc}	35,58 V	35,76 V	35,95 V	36,03 V	36,11 V
Short-circuit current	I _{sc}	6,82 A	6,86 A	6,97 A	7,07 A	7,17 A
Maximum power voltage	V _{mp}	27,98 V	28,25 V	28,71 V	28,75 V	28,78 V
Current at maximum power	I _{mp}	6,01 A	6,16 A	6,22 A	6,36 A	6,47 A

**Note - Under NOCT conditions: Irradiation 800 W/mq - Module temperature = 44,5°C - Air mass AM 1,5

Materials used

Cells per module	60
Cell type	3BB Polycrystalline
Cell size	156 mm x 156 mm
Front side	Anti-glare tempered glass (EN 12150)
Backsheet Color	Standard (white) / red / transparent

Thermal characteristics

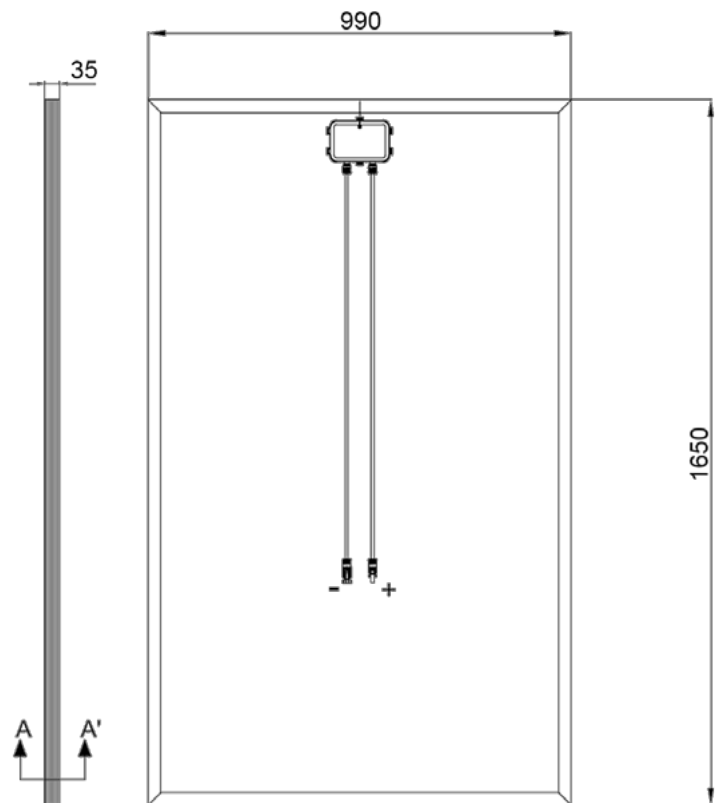
NOCT	44,5 +/-2°C
TC I _{sc}	3,425 mA/°C
TC U _{oc}	-0,138 V/°C
TC P _{mpp}	-0,43 %/°C

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	3

More Info

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



SEZIONE A - A'

