



### 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.
- Aluminum frame in black which provides solidity and sturdiness to withstand constant loads and climatic stresses such as snow and ice with applied pressure max 5,4kN/m<sup>2</sup>
- NOCT = 44,5°C
- Temperature range from -40°C a 85°C
- Mechanical load on surface max 550 kg/m<sup>2</sup>
- Hail impact resistance ø 25mm a 86 km/h

### Measures VE160PV Eco Poly Black

• Length	1650	mm
• Width	990	mm
• Height	35	mm
• Weight	18,5	kg
• Frame	Aluminum frame in black	
• Glass thickness	3,2	mm

## Behavior in standard test conditions STC\*

Power class (maximum value)	P <sub>max</sub>	240 Wp	245 Wp	250 Wp	255 Wp
Efficiency	η	14,69 %	15,00 %	15,31 %	15,61 %
Open-circuit voltage	V <sub>oc</sub>	36,84 V	37,31 V	37,33 V	37,53 V
Short-circuit current	I <sub>sc</sub>	8,68 A	8,69 A	8,93 A	8,95 A
Maximum power voltage	V <sub>mp</sub>	29,47 V	29,76 V	29,81 V	29,92 V
Current at maximum power	I <sub>mp</sub>	8,18 A	8,26 A	8,44 A	8,54 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 <sub>max</sub>	173,9 Wp	177,7 Wp	183,3 Wp	186,2 Wp
Open-circuit voltage	V <sub>oc</sub>	34,24 V	34,72 V	34,74 V	34,93 V
Short-circuit current	I <sub>sc</sub>	6,69 A	6,71 A	6,95 A	7,23 A
Maximum power voltage	V <sub>mp</sub>	27,01 V	27,25 V	27,31 V	27,42 V
Current at maximum power	I <sub>mp</sub>	6,44 A	6,52 A	6,71 A	6,79 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)

## Thermal characteristics

NOCT	44,5 +/-2°C
TC I <sub>sc</sub>	3,425 mA/°C
TC U <sub>oc</sub>	-0,138 V/°C
TC P <sub>mpp</sub>	-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 <sup>2</sup>
Number of bypass diodes	3

## More Info

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

