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**Solar Panel Guide
Specification Data Sheet**

**SP Enerji
SP 160-165P36
SP-165P36**

Also available on the web at
EnergyPal.com/sp-enerji-solar-panels/sp-165p36

Solar And Renewable Power System

Solar Power

150 W - 165 W

Multi-Crystalline Photovoltaic Module



Positive power tolerance
0~+4.99 watt



Withstand strong front
load 5400 Pa / rear Load 2400 Pa



100% EL inline inspection
Better module reliability



Ammonia resistance



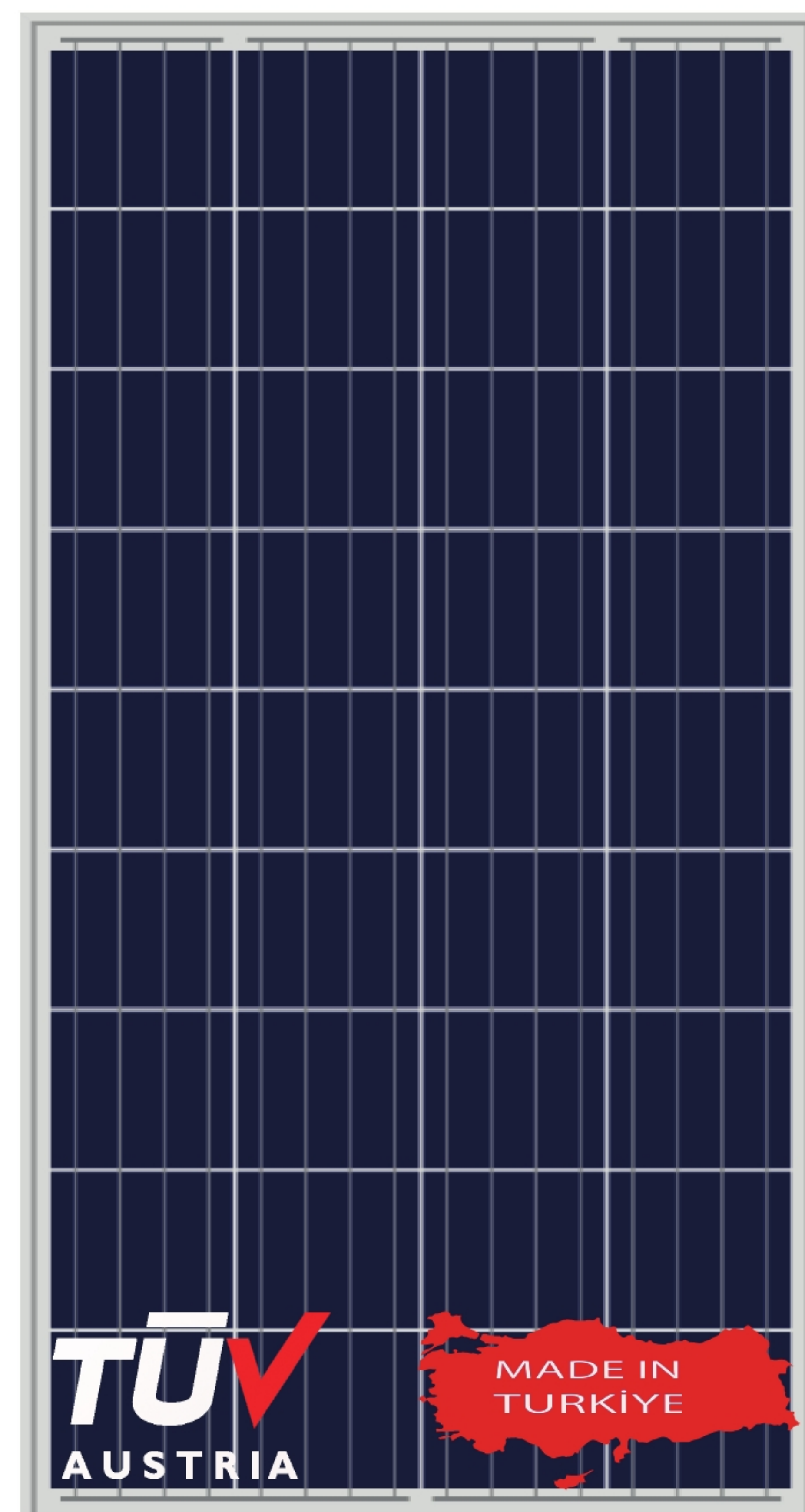
25 years power output warranty



Snail trail resistance



Design for 1500 VDC system voltage
Reduce the system BOS effectively



Harsh environment PV system installation

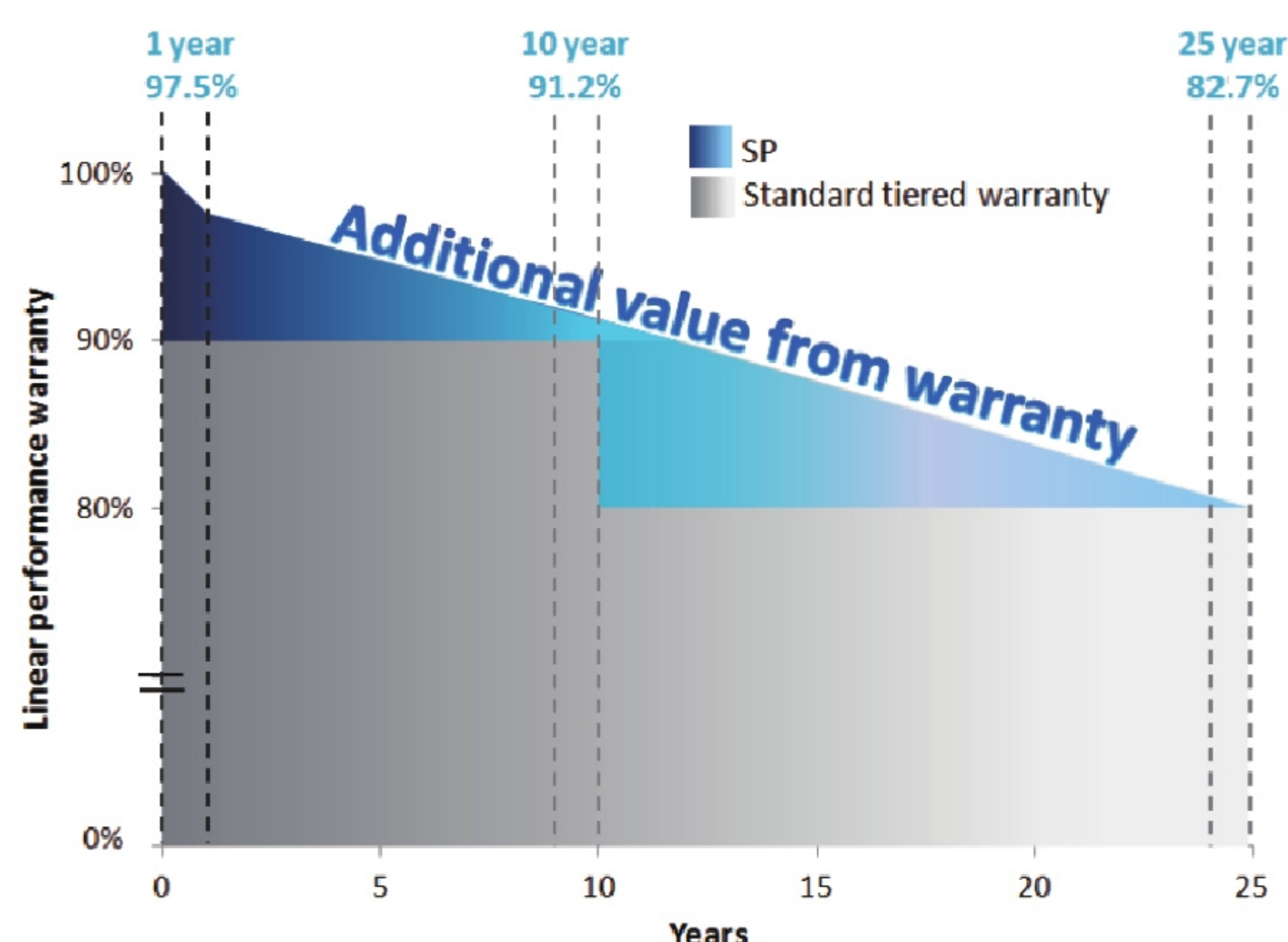


Excellent PID Performance


Reliability & Certification

Linear Performance Warranty

- 1-year: 97.5% power output
then power degradation 0.7% per year till 25th year
- 25-year: 80.7% power output
- 10-year: 91.2% power output



Solar And Renewable Power System



www.spenerji.com.tr

Electrical Data

MODEL	SP-150P36	SP-155P36	SP-160P36	SP-165P36
Maximum Rating Power (Pmax)	150 W	155 W	160 W	165 W
Module Efficiency	15.49%	15.51%	16.49%	16.9%
Open Circuit Voltage (Voc)	22.25 V	22.50 V	22.70 V	22.95 V
Maximum Power Voltage(Vmpp)	18.00 V	18.20 V	18.40 V	18.60 V
Short Circuit Current (Isc)	8.89 A	9.08 A	9.28 A	9.48 A
Maximum Power Current (Impp)	8.34A	8.52 A	8.70 A	8.88 A

* Standard Test Condition (STC): Cell Temperature 25 °C, Irradiance 1000 W/m², A.M. 1.5.
* Values w/o tolerance are typical numbers.
* Specifications subject to change

Mechanical Data

Item	Specification
Dimension	1480 mm (L) ¹ x 680 mm (W) ¹ x 30 mm (D) ² / 58.26'' (L) ¹ x 26.77'' (W) ¹ x 1.18'' (D) ²
Weight	11.6 kg / 25.57 lbs
Solar Cell	36 multicrystalline 6'' silicon cells
Front Glass	Anti-reflective tempered solar glass, 3.2mm thickness
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate)
Back Cover	Composite film, white
Junction Box	IP 68 rated; Cable: 0,800 mm
Frame	Anodized aluminum frame, original or black
Packaging Configuration	30 pcs Per Pallet, 1320 pcs Per 40' HQ container

¹ : With assembly tolerance of ± 2 mm [± 0.08'']
² : With assembly tolerance of ± 0.8 mm [± 0.03'']

Operating Conditions

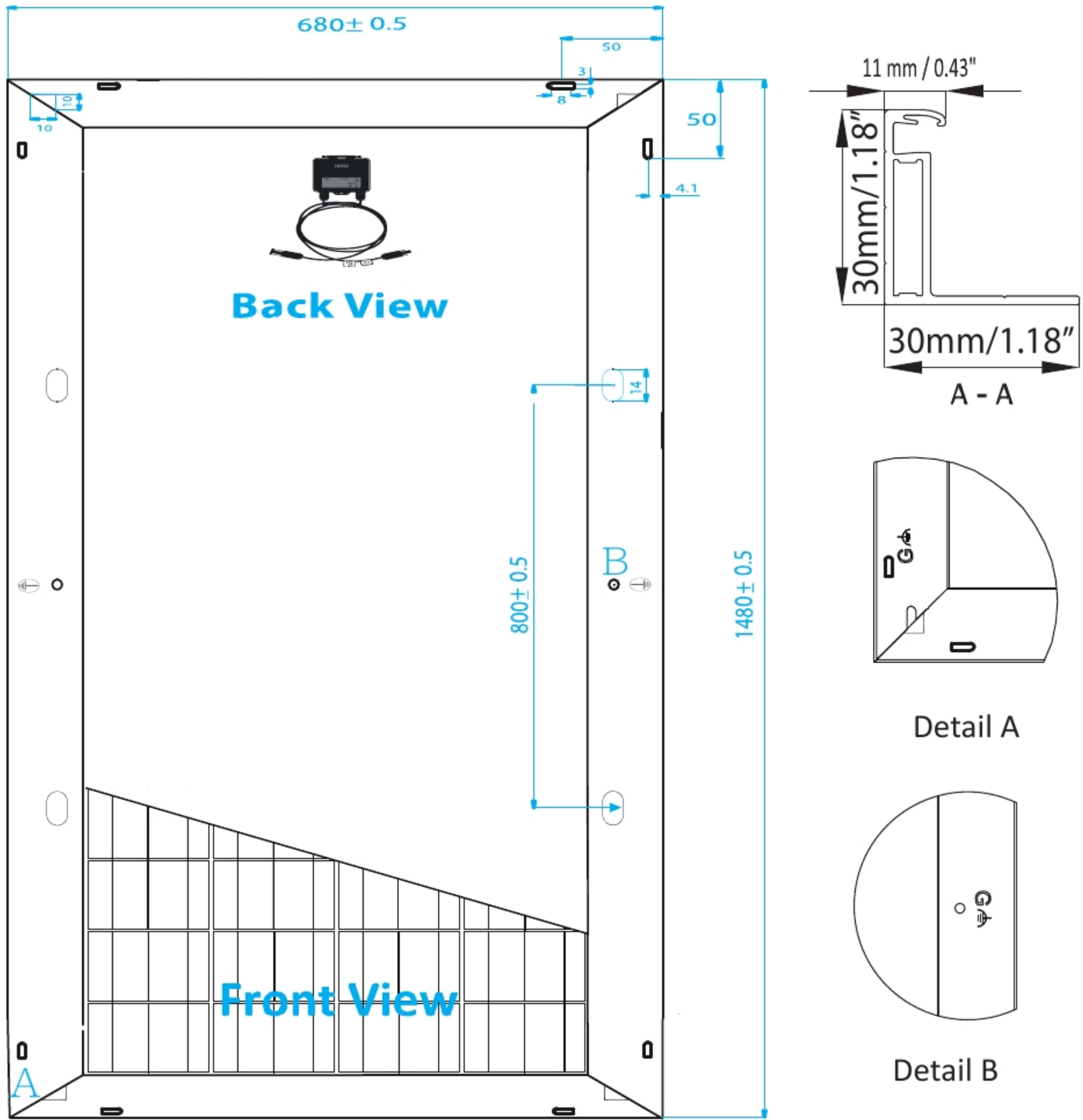
Item	Specification
Mechanical Load	5400 Pa
Maximum System Voltage	DC 1000 V
Series Fuse Rating	10 A
Operating Temperature	-40 to 85 °C

Temperature Characteristics

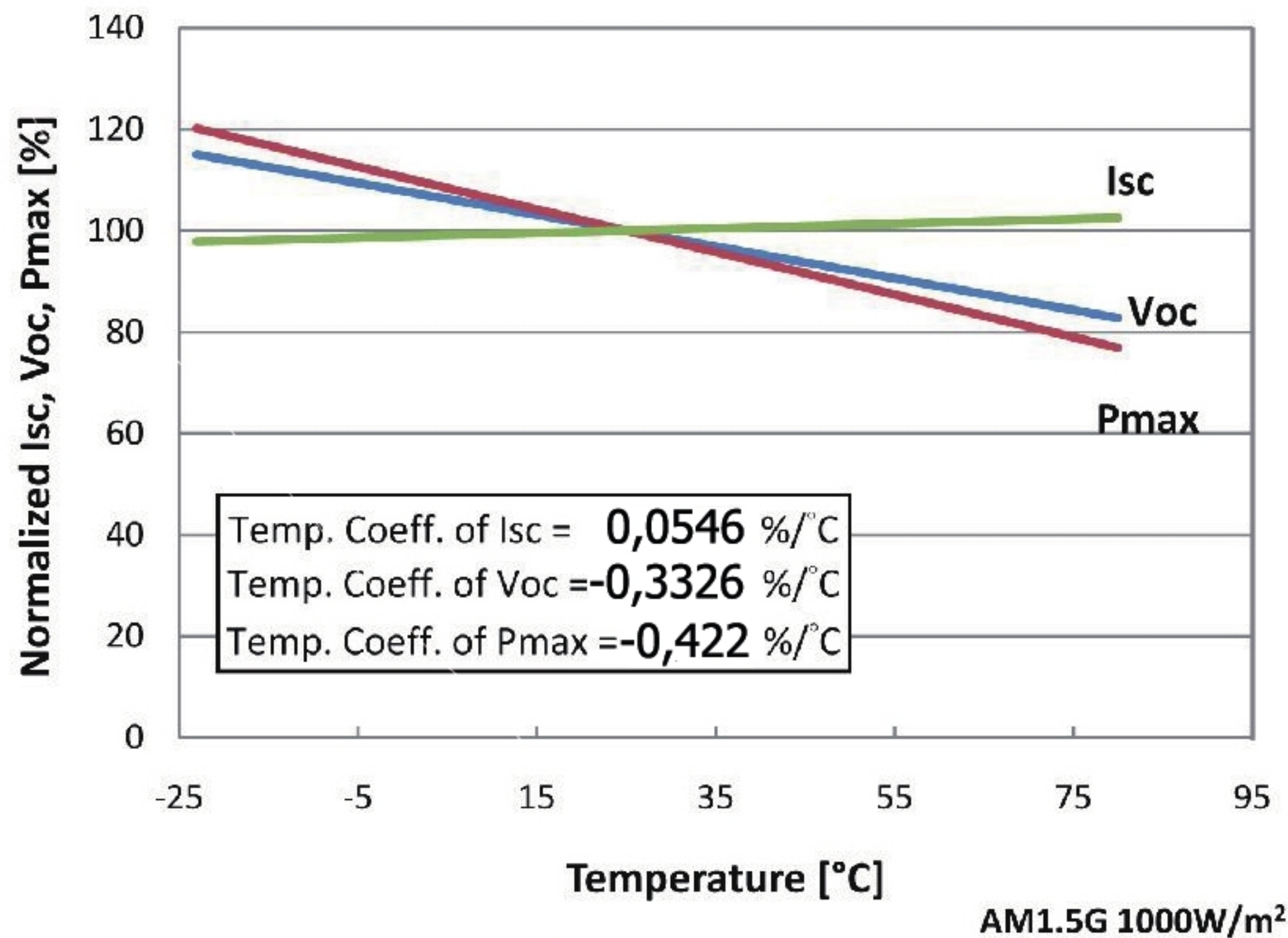
Item	Specification
Nominal Operating Cell Temperature	44 °C ± 2°C
Temperature Coefficient of Isc	0,0546 % / °C
Temperature Coefficient of Voc	-0,3326% / °C
Temperature Coefficient of Pmax	-0,422 % / °C

* Nominal Operating Cell Temperature (NOCT): Irradiance 800W/m², Ambient Temperature 20 °C, Wind Speed 1 m/s
* Please refer to NSP's Standard Module Installation Manual before using the product
* Reduction in efficiency from 1000 W/m² to 200 W/m² at 25 °C: 3.5% ± 2 %

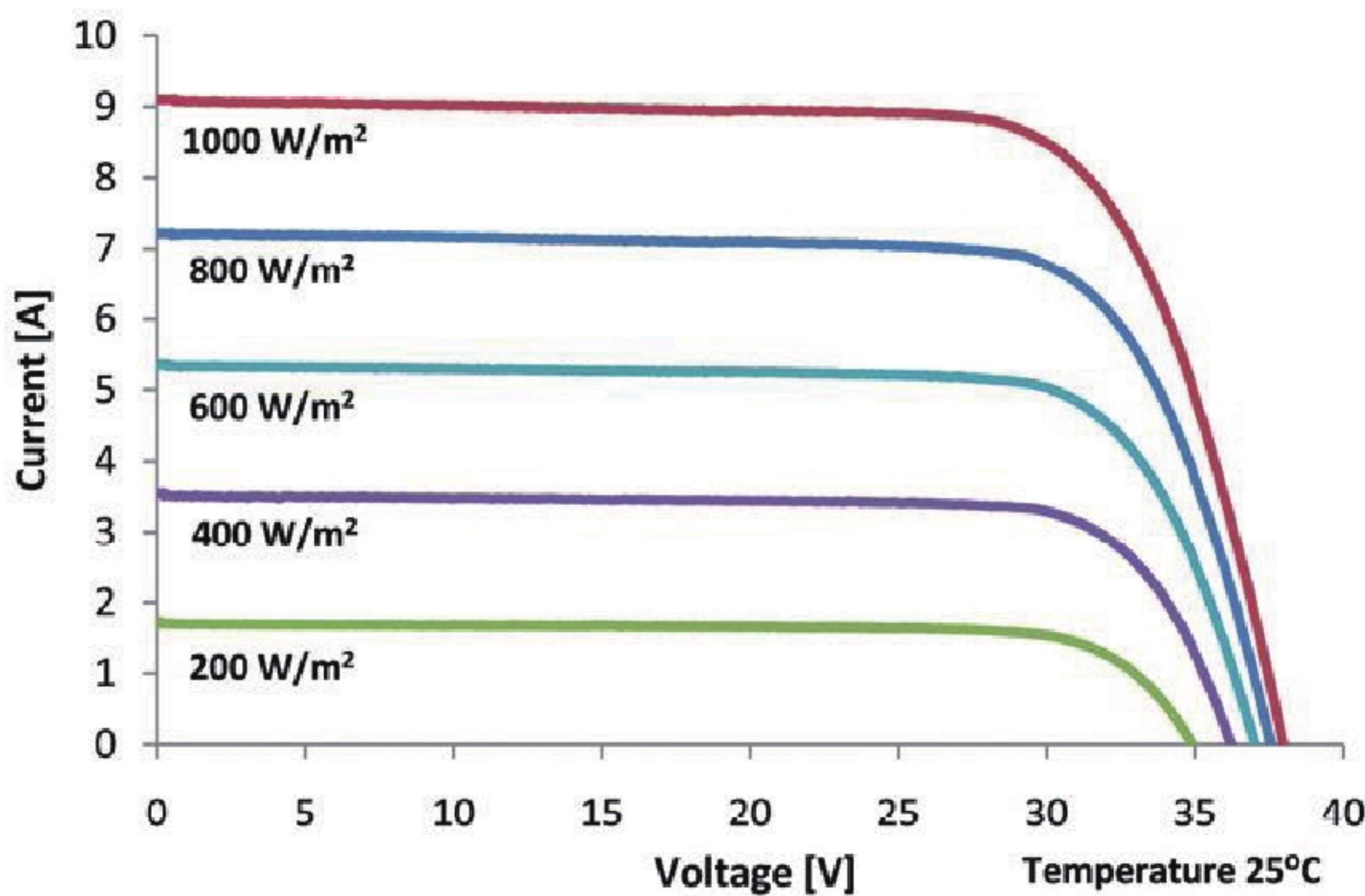
Front View & Back View



Dependence on Temperature



Dependence on Irradiance



Certificates

TUV Austria Certification, CE, ISO 9001:2015, ISO 14001: 2015, OHSAS 18001, FPC Factory Process Control certificate

Contact Us

www.spenerji.com

Factory
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