

# ZX5M 230–275 W



## 275 Watt (Black) Monocrystalline Solar Module

ZX5M-275 W is one of ZNSHINE SOLAR's most popular panels. Versatile and adaptable, with power output ranging from 230 Wp up to 275 Wp, it is perfect for both groundmounted and commercial rooftop systems.

During the manufacturing process of this panel rigorous quality control meets the highest international standards: ISO 9001, 14001 and 18001.

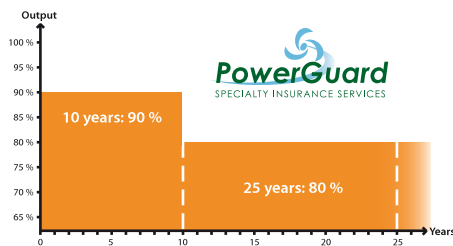
Being approved by international testing institutions like TÜV Süd, TÜV Rheinland and BABT this panel comes with a 25-year output guarantee of 80 % power production and a 10-year manufacturer warranty.



**RoHS (Restriction of Hazardous Substances):** Like all other panels from ZNSHINE SOLAR this fulfills all restrictions regarding the use of Lead, Mercury, Cadmium, Hexavalent Chromium, PBB or PBDE. Therefore, you can be sure about one thing: We take our green mission very responsibly.

### 25 years power output guarantee insured by the PowerGuard insurance

As one of the first manufacturers worldwide all modules from ZNSHINE SOLAR are equipped with the new PowerGuard insurance. This means you can rely on an insured output of 90 % for 10 years and 80 % for 25 years. More security cannot be achieved by any other insurance!

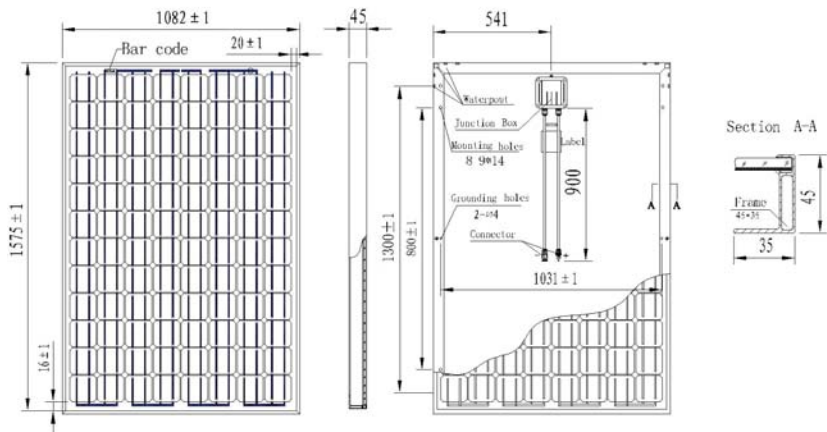


### The benefits of this panel:

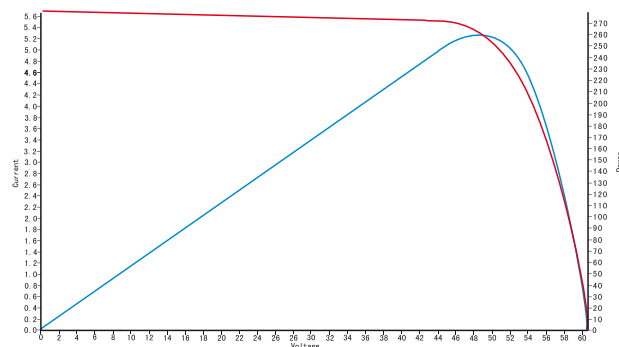
- » High efficiency up to 16.14 %
- » Highly automated and vertically integrated manufacturing process
- » Output guarantee of 25 years
- » Europe-wide references
- » Bankable in Europe



## Dimensions of PV module ZX5M 230-275 W



## I-V Curves of PV module ZX5M 230-275 W



## Electrical Data

ZX230 (48) MS ZX235 (48) MS ZX240 (48) MS ZX245 (48) MS ZX250 (48) MS ZX255 (48) MS ZX260 (48) MS ZX265 (48) MS ZX270 (48) MS ZX275 (48) MS

	ZX230 (48) MS	ZX235 (48) MS	ZX240 (48) MS	ZX245 (48) MS	ZX250 (48) MS	ZX255 (48) MS	ZX260 (48) MS	ZX265 (48) MS	ZX270 (48) MS	ZX275 (48) MS
Peak Power Watts- $P_{MAX}$ (WP)	230	235	240	245	250	255	260	265	270	275
Power Output Tolerance- $P_{MAX}$ (%)	0 ~ +3	0 ~ +3	0 ~ +3	0 ~ +3	0 ~ +3	0 ~ +3	0 ~ +3	0 ~ +3	0 ~ +3	0 ~ +3
Maximum Power Voltage $V_{MAX}$ (V)	47.70	47.90	48.10	48.40	48.70	49.00	49.30	49.40	49.50	49.50
Maximum Power Current- $I_{MPP}$ (A)	4.82	4.91	4.99	5.06	5.14	5.21	5.27	5.36	5.45	5.56
Open Circuit Voltage- $V_{OC}$ (V)	59.20	59.30	59.40	59.50	59.60	59.80	60.00	60.10	60.40	60.60
Short Circuit Current- $I_{SC}$ (A)	5.16	5.27	5.34	5.43	5.49	5.55	5.64	5.73	5.83	5.94
Module Efficiency $\eta_m$ (%)	13.50	13.79	14.08	14.38	14.67	14.96	15.26	15.55	15.84	16.14

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C)

## Mechanical Data

Solar cells	Mono 125 x 125 mm, ( $\phi$ 165)
Cells orientation	96 (8 x 12)
Module dimension	1575 x 1082 x 45 mm
Weight	22 kg
Glass	High transparency, Low Iron, Tempered glass 3.2 mm
Frame	Anodized aluminium alloy
Junction box	IP 65
Cables/Connector	Diameter 4 mm <sup>2</sup> , Length 900mm.
Number of Diodes	4
Colour	Black Frame, White Backsheet / Black Frame, Black Backsheet

## Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	47°C ( $\pm$ 2°C)
Temperature Coefficient of $P_{MPP}$	-0.42%/°C
Temperature Coefficient of $V_{OC}$	-0.29%/°C
Temperature Coefficient of $I_{SC}$	0.04%/°C

## Working Conditions

Maximum System Voltage	DC1000V (TUV)
Operating Temperature	(-40 ~ +85) °C
Maximum Series Fuses	10 A
Front & rear static load test(eg: wind)	2400 pa
Front load test (eg: snow)	5400 pa

## Warranty information

- 10 years workmanship warranty
- 10 years warranty, 90 % power output
- 25 years warranty, 80 % power output

## Packaging information

Modules per box	24 pcs
Modules per pallet	48 pcs
Modules per 40" HQ container	672 pcs

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