

ZXM6-60 Series

Znshinesolar 5BB Monocrystalline PV Module



60

Mono Poly Solutions

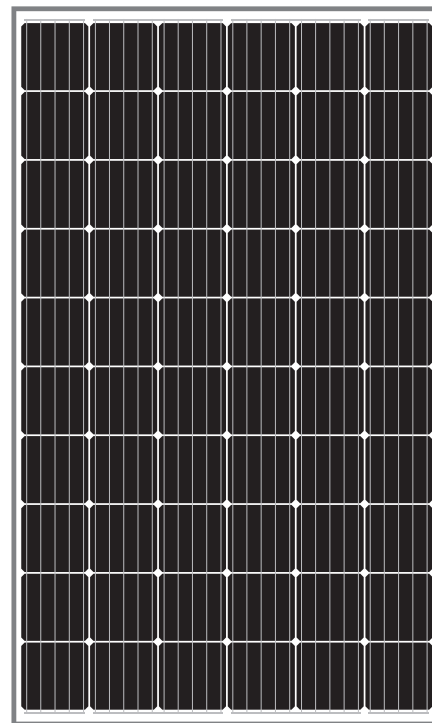
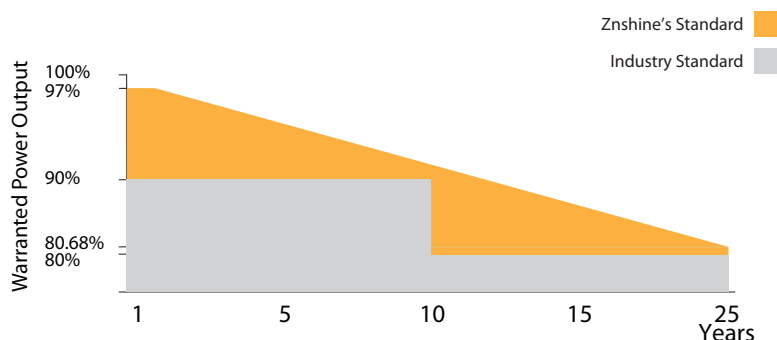
295W | 300W | 305W | 310W | 315W

Made with selected materials and components to grant quality, duration, efficiency and through outputs, the ZXM6-60 monocrystalline modules by ZNSHINE SOLAR represent a highly flexible solution for diverse installation types, from industrial rooftop plants to small home PV systems or large ground surfaces. This allows you to produce clean energy while reducing your energy bill.

ZNSHINE SOLAR' S ZXM6-60 monocrystalline solar modules are tested and approved by international acknowledged laboratories, so that we can offer our customers a reliable and price-quality optimized product. The linear warranty on product outputs further ensures increased security and return on investments over time.

10 years workmanship warranty/25 years output warranty

0.68% Annual Degradation over 25 years



Tier 1 & Bankable

Well known trade mark in China;
Tier 1 bankable brand globally



High Efficiency

Graphene coating can increase about 2W of the module efficiency by rising around 0.5% of the light transmission



Anti PID

Limited power degradation of ZXM6-60 module caused by PID effect is guaranteed under strict testing condition for mass production



Better Weak Illumination Response

Lower temperature coefficient and wide spectral response, higher power output, even under low-light settings



Certified to withstand the most challenging environmental conditions

5400 Pa snow load
2400 Pa wind load



Customerization—Graphene Coating

Graphene coating modules can increase power generation and self-cleaning, also can save maintenance cost



ZNShine PV-Tech Co., LTD, founded in 1988, is a world-leading high-performance PV module manufacturer, PV power station developer, EPC and power station operator. With its state-of-the-art production lines, the company boasts module output of 5GW. Bloomberg has listed ZNShine as a global Tier 1 PV manufacturer and Top 4 reliable PV supplier.

www.znshinesolar.com

Module Type	ZXM6-60-295/M	ZXM6-60-300/M	ZXM6-60-305/M	ZXM6-60-310/M	ZXM6-60-315/M
Nominal Power Watt Pmax(W)	295	300	305	310	315
Power Output Tolerance Pmax(%)	0~+3	0~+3	0~+3	0~+3	0~+3
Maximum Power Voltage Vmp(V)	32.2	32.4	32.7	32.9	33.1
Maximum Power Current Imp(A)	9.17	9.26	9.33	9.43	9.52
Open Circuit Voltage Voc(V)	39.5	39.7	39.9	40.1	40.3
Short Circuit Current Isc(A)	9.67	9.75	9.85	9.95	10.05
Module Efficiency (%)	18.02	18.33	18.63	18.94	19.24

Maximum Power Pmax(Wp)	219.0	222.3	225.8	229.3	232.4
Maximum Power Voltage Vmpp(V)	29.8	30.2	30.4	30.6	30.6
Maximum Power Current Impp(A)	7.34	7.36	7.42	7.49	7.61
Open Circuit Voltage Voc(V)	36.6	36.7	36.9	37.1	37.3
Short Circuit Current Isc(A)	7.81	7.81	7.88	7.96	8.12

NMOT	45°C ±2°C
Temperature coefficient of Pmax	-0.39%/K
Temperature coefficient of Voc	-0.29%/K
Temperature coefficient of Isc	0.05%/K

Solar cells	Mono 156.75×156.75 mm
Cells orientation	60 (6×10)
Module dimension	1650×992×35 mm
Weight	19.5 kg
Glass	High transparency,low iron,tempered
	Glass 3.2 mm (AR-coating)
Junction box	IP 68, 3 diodes
Cables	4 mm² ,900 mm
Connectors	MC4-compatible

Maximum system voltage	1000 / 1500 V DC
Operating temperature	-40°C ~ +85°C
Maximum series fuse	15 A
Maximum load(snow/wind)	5400 Pa / 2400 Pa

Packing Type	40' HQ
Piece/Box	30
Piece/Container	840

Technical drawing of a solar panel assembly, showing front, side, and cross-section views with dimensions and labels.

Front View (Left): Shows a grid of solar cells. Label: **Barcode 1**.

Side View (Middle): Shows the profile of the panel. Dimensions: 735 ± 1 (total height), 902 ± 2 (bottom section height), 905 ± 1 (middle section height), 1000 ± 1 (total width), 1050 ± 2 (total length).

Internal Components and Dimensions (Right):

- junction box**: Located at the top center.
- Barcode 2**: Located below the junction box.
- label**: Located below Barcode 2.
- Drainage holes**: $16 \times 8 \times 3$, located near the top edge.
- Mounting holes**: $\varnothing 12 \times 3$, located near the bottom edge.
- Grounding identification**: Located at the bottom center.
- Grounding holes**: $2 \times \varnothing 4$, located at the bottom center.
- Dimensions for internal components**: 350 ± 1 , 350 ± 1 , 350 ± 1 , 945 ± 2 .

Cross-sections (Right):

- A-A**: $12:1$ magnification, showing the top profile with a height of 35 and a width of 35 .
- B-B**: $12:1$ magnification, showing the bottom profile with a height of 35 .

Figure 10 is a line graph showing the current and power characteristics of a solar cell under different irradiance levels. The x-axis represents Voltage (V) from 0 to 40. The left y-axis represents Current (A) from 0 to 10, and the right y-axis represents Power (W) from 0 to 325. Five data series are plotted for irradiance levels of 1,000 W/m², 800 W/m², 600 W/m², 400 W/m², and 200 W/m². The current increases linearly with voltage for all irradiance levels. The power increases to a peak and then decreases, with the peak power decreasing as irradiance decreases.

Voltage (V)	Current (A) at 1,000 W/m²	Current (A) at 800 W/m²	Current (A) at 600 W/m²	Current (A) at 400 W/m²	Current (A) at 200 W/m²
0	0	0	0	0	0
5	1.2	0.8	0.6	0.4	0.2
10	2.4	1.6	1.2	0.8	0.4
15	3.6	2.4	1.8	1.2	0.6
20	4.8	3.2	2.4	1.6	0.8
25	6.0	4.0	3.0	2.0	1.0
30	7.2	4.8	3.6	2.4	1.2
32	7.8	5.2	3.8	2.6	1.3
35	8.4	5.6	3.6	2.4	1.2
40	9.0	6.0	3.0	2.0	1.0