

STINGRAY 190 - 205

Monocrystalline photovoltaic module with Gallium (alu and black)

STINGRAY-72 cells belongs to the next generation of ZNSHINE SOLAR's products. Its strength lies in gallium doping, which allows slower degradation and higher yields. Versatile and adaptable, with a power output ranging from 190 Wp up to 205 Wp (black modules up to 200 Wp), this module is a top choice for residential rooftop systems as well as for ground-mounted installations.



High module conversion efficiency up to 16,06 %



Insured output warranty of 25 years



Green Certifications: PV-Cycle, carbon footprint and RoHS



Without Potential-Induced Degradation (PID-free)



Resistant against ammonia and salt mist



Certified to withstand extreme snow loads of 5.400 Pascal

This module is made of reliable and carefully selected components. With a 25-year output warranty and a 10-year workmanship warranty, ZXM5-72 STINGRAY meets rigorous quality controls and international standard such as ISO 9001, ISO 14001 and OHSAS 18001. The panel is tested by widely acknowledged certifying institutions such as TÜV Süd. The recycling of this module at the product's end of life follows the prescriptions of PV-CYCLE Association certification.

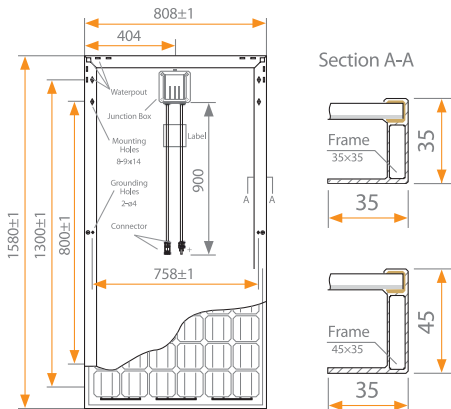


25 years power output guarantee insured by PowerGuard

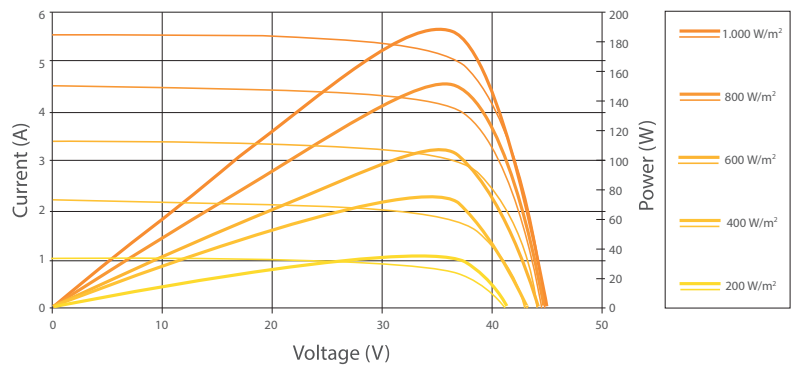
ZNSHINE SOLAR is one of the first manufacturers whose modules participate in the PowerGuard insurance programme, guaranteeing an output of 92% for 10 years and of 85% for 25 years even in the unlikely case of manufacturer's insolvency.



Dimensions of the PV module



I-V Curves of the PV module



Electrical Data

	ZXMS-72-190/MS(GA)	ZXMS-72-195/MS(GA)	ZXMS-72-200/MS(GA)	ZXMS-72-205/MS(GA)
Nominal Power Watt P_{max} (W _p)	190	195	200	205
Power Output Tolerance P_{max} (%)	0 ~ +3	0 ~ +3	0 ~ +3	0 ~ +3
Maximum Power Voltage V_{max} (V)	36.65	36.90	37.30	37.55
Maximum Power Current I_{mpp} (A)	5.18	5.28	5.36	5.46
Open Circuit Voltage V_{oc} (V)	45.36	45.50	45.65	45.75
Short Circuit Current I_{sc} (A)	5.58	5.63	5.65	5.70
Module Efficiency η_m (%)	14.88	15.27	15.67	16.06
Cell Efficiency η_c (%)	17.39	17.89	18.38	18.92

Mechanical Data

Solar Cells	Mono 125 × 125 mm
Cells Orientation	72 (6 × 12)
Module Dimensions	1580 × 808 × 35 mm / 45 mm
Weight	16.0 kg
Glass	High transparency, low Iron, AR-coating, tempered glass 3.2 mm
Frame	Anodized Aluminium alloy. Frame and backside in alu or black
Junction Box	IP 65
Cables/Connector	4 mm ² , 900 mm, MC4-compatible
Number of Diodes	3

Temperature Ratings

Nominal Operating Cell Temperature	45 °C (±2 °C)
Temperature Coefficient of P_{mpp}	-0.42 %/K
Temperature Coefficient of V_{oc}	-0.29 %/K
Temperature Coefficient of I_{sc}	0.04 %/K

Working Conditions

Maximum System Voltage	1000 V DC (TÜV)
Operating Temperature	from -40 to +85 °C
Maximum Series Fuse	10 A
Maximum Load (Snow/Wind)	5400 Pa / 2400 Pa
Ammonia-/Salt Mist Resistance	IEC 62716, 61701 ✓

Warranty Information

- 10 years workmanship warranty
- 10 years warranty at 92% power output
- + further 15 years warranty at 85% power output

Packaging Information

Module per Box	36 pcs. (35 mm)
	30 pcs. (45 mm)
Module per 40' HQ Container	1008 pcs. (35 mm)
	840 pcs. (45 mm)

¹ Measurement Tolerance STC: ± 3% (P_{max}), ± 10% (V_{max} , I_{mpp} , V_{oc} , I_{sc}). Values at Standard Test Conditions STC (Air Mass AM 1.5, Irradiance 1000 W/m², Cell Temperature 25 °C)
 Remark: Please read safety and installation instructions before using the product | Subject to change without prior notice © ZNSHINE SOLAR 2013 | Versionscode: ZXMS-72-ST-1307.E

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