

*Please check the valid version of Limited Product Warranty which is officially released by ZNSHINE PV-TECH Co.,Ltd.

ZXM7-SH120 Series

10BB HALF-CELL Black Monocrystalline PERC PV Module

435-455W

POWER RANGE

21.08%

MAXIMUM EFFICIENCY

0.55%

YEARLY DEGRADATION



12 YEARS PRODUCT WARRANTY



25 YEARS OUTPUT GUARANTEE



IEC 61215/IEC 61730/IEC 61701/IEC 62716/UL6 1730

ISO 14001: Environmental Management System

ISO 9001: Quality Management System

ISO45001: Occupational Health and Safety Management System

*As there are different certification requirements in different markets, please contact your local Znshine sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

KEY FEATURES



Excellent Cells Efficiency

MBB technology reduce the distance between busbars and finger grid line which is benefit to power increase.



Better Weak Illumination Response

More power output in weak light condition, such as haze, cloudy, and early morning.



Anti PID

Ensured PID resistance through the quality control of cell manufacturing process and raw materials.



Adapt To Harsh Outdoor Environment

Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment.



TIER 1

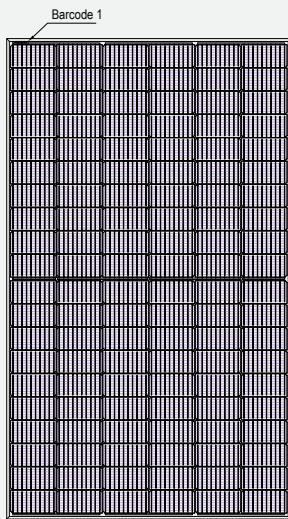
Global, Tier 1 bankable brand, with independently certified advanced automated manufacturing.



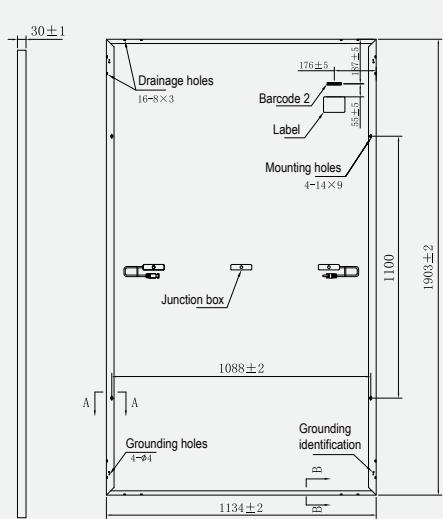
Excellent Quality Management System

Warranted reliability and stringent quality assurances well beyond certified requirements.

DIMENSIONS OF PV MODULE(mm)



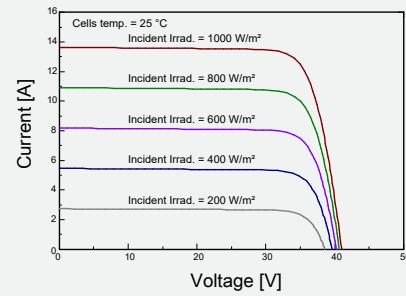
Front View



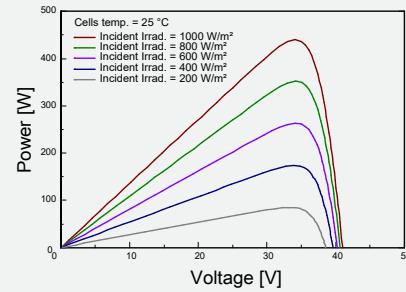
Back View

*Remark: customized frame color and cable length available upon request

I-V CURVES OF PV MODULE(440W)



P-V CURVES OF PV MODULE(440W)



ELECTRICAL CHARACTERISTICS | STC*

MECHANICAL DATA

Nominal Power Watt Pmax(W)*	430	435	440	445	450	455	Solar cells	Mono PERC
Power Output Tolerance Pmax(%)	0~+3	0~+3	0~+3	0~+3	0~+3	0~+3	Cells orientation	120 (6x20)
Maximum Power Voltage Vmp(V)	33.70	33.90	34.10	34.30	34.50	34.70	Module dimension	1903x1134x30 mm (With Frame)
Maximum Power Current Imp(A)	12.77	12.84	12.91	12.98	13.05	13.12	Weight	23±1 kg
Open Circuit Voltage Voc(V)	40.60	40.80	41.00	41.20	41.40	41.60	Glass	3.2mm, High Transmission, AR Coated Tempered Glass
Short Circuit Current Isc(A)	13.50	13.57	13.64	13.71	13.78	13.85	Junction box	IP 68, 3 diodes
Module Efficiency (%)	19.93	20.16	20.39	20.62	20.85	21.08	Cables	4 mm ² , 350 mm (With Connectors)

*The data above is for reference only and the actual data is in accordance with the practical testing

*STC (Standard Test Condition): Irradiance 1000W/m², Module Temperature 25°C, AM 1.5

*Measuring tolerance: ±3%

*Please refer to regional datasheet for specified connector

ELECTRICAL CHARACTERISTICS | NMOT

TEMPERATURE RATINGS*

WORKING CONDITIONS

Maximum Power Pmax(Wp)	321.10	325.20	328.90	332.60	336.40	340.10	NMOT	44°C ±2°C	Maximum system voltage	1500 V DC
Maximum Power Voltage Vmpp(V)	31.30	31.50	31.70	31.90	32.10	32.30	Temperature coefficient of Pmax	-0.35%/°C	Operating temperature	-40°C~+85°C
Maximum Power Current Impp(A)	10.25	10.31	10.37	10.43	10.48	10.54	Temperature coefficient of Voc	-0.29%/°C	Maximum series fuse	25 A
Open Circuit Voltage Voc(V)	37.90	38.10	38.30	38.50	38.70	38.90	Temperature coefficient of Isc	0.05%/°C	Front Side Maximum Static Loading	Up to 5400 Pa
Short Circuit Current Isc(A)	10.91	10.96	11.02	11.07	11.13	11.18			Rear Side Maximum Static Loading	Up to 2400 Pa

*Do not connect Fuse in Combiner Box with two or more strings in parallel connection

**Customized packaging is available upon request.

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.

They only serve for comparison among different module types.

Caution: Please be kindly advised that PV modules should be handled and installed by qualified people who have professional skills and please carefully read the safety and installation instructions before using our PV modules.

PACKAGING CONFIGURATION **

Piece/Box	36
Piece/Container(40'HQ)	864



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Note: Specifications included in this datasheet are subject to change without notice. ZNSHINE reserves the right of final interpretation © ZNSHINE SOLAR 2022 | Version: ZXM7-SH120 2201.E

No special undertaking or warranty for the suitability of special purpose or being installed in extraordinary surroundings is granted unless as otherwise specifically committed by manufacturer in contract document