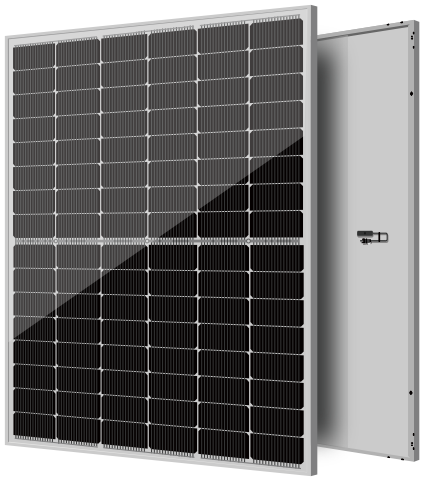
ZNSHINESOLAR

ZXMR-UHLD96 Series

16BB HALF-CELL N-Type TOPCon
Double Glass Monocrystalline PV Module

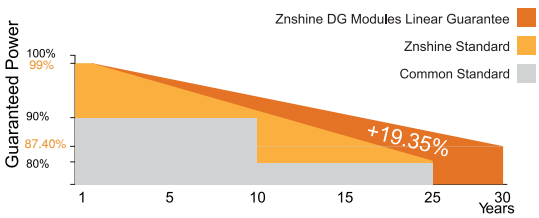


440-455W	22.77%	0.40%
POWER RANGE	MAXIMUM EFFICIENCY	YEARLY DEGRADATION

12 YEARS PRODUCT WARRANTY

30 YEARS OUTPUT GUARANTEE

12 years product warranty for general application
15 years product warranty for Rooftop PV system
30 years output warranty / 0.40% Annual Degradation over 30 years



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

IEC 61215/IEC 61730/IEC 61701/IEC 62716

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

SMBB 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.

TIER 1

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

Excellent Quality Managerment System

Warranted reliability and stringent quality assurances well beyond certified requirements.

Founded in 1988, ZNShine solar is a world's leading high-tech PV module manufacturer.With the advanced production lines, the company boasts module capacity of 12 GW. Bloomberg has listed ZNShine as a global Tier 1 PV module maker. Today Znshine has distributed its sales to more than 60 countries around the globe.

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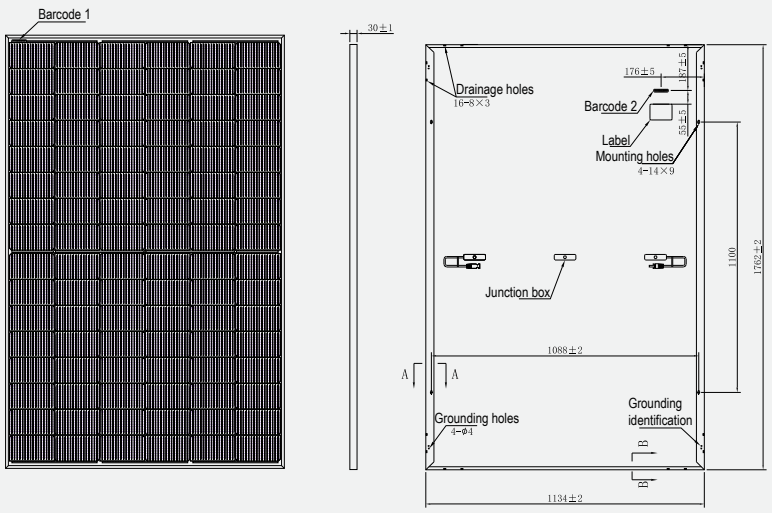
DIMENSIONS OF PV MODULE(mm)

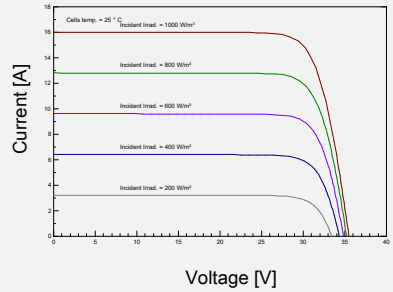


Front View

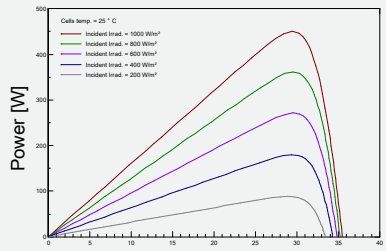
Back View

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

I-V CURVES OF PV MODULE(450W)



P-V CURVES OF PV MODULE(450W)



ELECTRICAL CHARACTERISTICS | STC*

Module Type	ZXMR UHLD96-440/N	ZXMR UHLD96-445/N	ZXMR UHLD96-450/N	ZXMR UHLD96-455/N
Nominal Power Watt Pmax(W)*	440±5	445±5	450±5	455±5
Maximum Power Voltage Vmp(V)	29.30	29.50	29.70	29.90
Maximum Power Current Imp(A)	15.02	15.09	15.16	15.22
Open Circuit Voltage Voc(V)	35.10	35.30	35.50	35.70
Short Circuit Current Isc(A)	15.89	15.96	16.03	16.10
Module Efficiency (%)	22.02	22.27	22.52	22.77

*The data above is for reference only and the actual data is in accordance with the pratical testing
*STC (Standard Test Condition): Irradiance 1000W/m², Module Temperature 25±2℃, AM 1.5
*Measuring uncertainty: ±3%, all the electrical characteristics such as Power, Im, Vm and FF are within ±3% tolerance.

MECHANICAL DATA

Solar cells	N-type Monocrystalline, Rectangular cells
Cells orientation	96 (6×16)
Module dimension	1762×1134×30 mm (With Frame)
Weight	25.0±1.0 kg
Glass	2.0 mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction box	PV-XT1609Nxyz, IP 68, 3 diodes
Cables	H1Z2Z2-K 1×4,0mm²
Connectors*	PV-XT101.1 Suzhou Xtong Photovoltaic Technologies Co., Ltd. manufactured in china

*Please refer to regional datasheet for specified connector

ELECTRICAL CHARACTERISTICS | NMOT

Maximum Power Pmax(Wp)	334.50	338.10	342.30	346.00
Maximum Power Voltage Vmp(V)	27.50	27.60	27.80	28.00
Maximum Power Current Imp(A)	12.18	12.23	12.29	12.35
Open Circuit Voltage Voc(V)	33.30	33.50	33.60	33.80
Short Circuit Current Isc(A)	12.82	12.87	12.93	12.99

*NMOT:Irradiance 800W/m²,Ambient Temperature 20℃,AM 1.5,Wind Speed 1m/s

TEMPERATURE RATINGS

NMOT	44℃ ±2℃
Temperature coefficient of Pmax	(-0.28±0.028)%/℃
Temperature coefficient of Voc	-0.23%/℃
Temperature coefficient of Isc	0.045%/℃

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

WORKING CONDITIONS

Maximum system voltage	1500 V DC
Operating temperature	-40℃~+85℃
Maximum series fuse	25 A
Maximum load front/back	3600/1600 with safety factor 1.5
Fire safety class	Class A
Safety class	Class II

PACKAGING CONFIGURATION *

Piece/Box	36
Piece/Container(40'HQ)	936

*Customized packaging is available upon request.

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