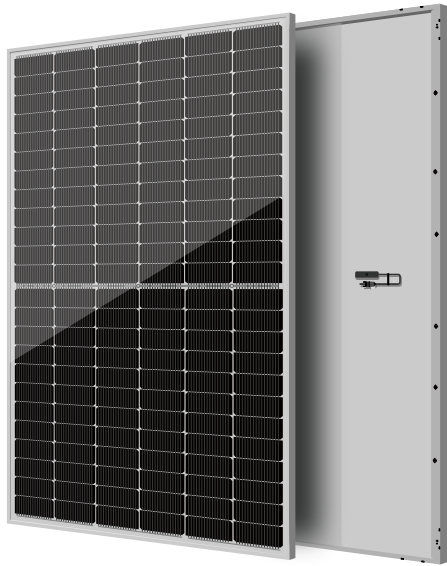




ZXMR-UPLD144 Series

SMBB HALF-CELL N-Type Monofacial Double Glass
Monocrystalline PV Module

620-645W

POWER RANGE

23.07%

MAXIMUM EFFICIENCY

0.40%

YEARLY DEGRADATION



12 YEARS PRODUCT WARRANTY



30 YEARS OUTPUT GUARANTEE

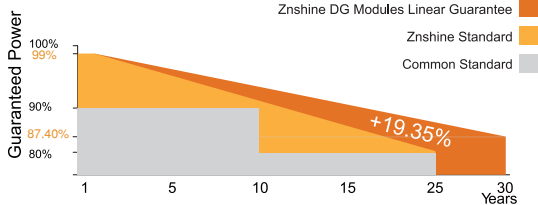


IEC 61215/IEC 61730

ISO 14001: Environmental Management System

ISO 9001: Quality Management System

ISO45001: Occupational Health and Safety Management System



*Please check the Limited Warranty for Standard PV Modules which is officially released by ZNSHINE PV-TECH Co.,Ltd.

*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.



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

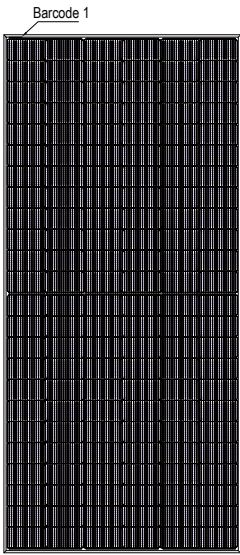
Global, Tier 1 bankable brand, with independently certified advanced automated manufacturing.



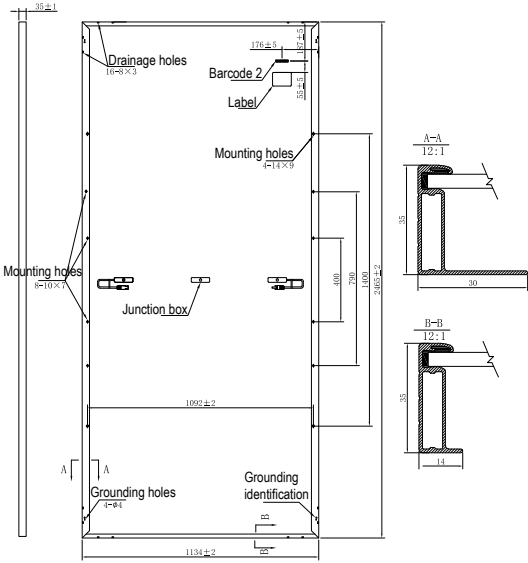
Excellent Quality Management System

Warranted reliability and stringent quality assurances well beyond certified requirements.

DIMENSIONS OF PV MODULE(mm)



Barcode 1



Drainage holes
(10- ϕ $\times$ 3)

Barcode 2

Label

Mounting holes
4- ϕ 14 $\times$ 9

Mounting holes
8- ϕ 10 $\times$ 7

Junction box

Grounding holes
(1- ϕ 6)

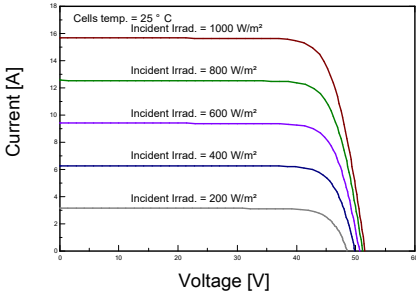
Grounding identification

Front View

Back View

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

I-V CURVES OF PV MODULE(640W)



Cells temp. = 25 °C
Incident Irrad. = 1000 W/m²

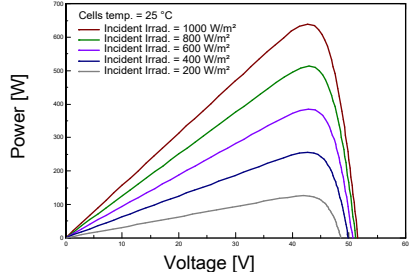
Incident Irrad. = 800 W/m²

Incident Irrad. = 600 W/m²

Incident Irrad. = 400 W/m²

Incident Irrad. = 200 W/m²

P-V CURVES OF PV MODULE(640W)



Cells temp. = 25 °C
Incident Irrad. = 1000 W/m²

Incident Irrad. = 800 W/m²

Incident Irrad. = 600 W/m²

Incident Irrad. = 400 W/m²

Incident Irrad. = 200 W/m²

ELECTRICAL CHARACTERISTICS | STC*

Nominal Power Watt Pmax(W)*	620	625	630	635	640	645
Maximum Power Voltage Vmp(V)	42.20	42.40	42.60	42.80	43.00	43.20
Maximum Power Current Imp(A)	14.69	14.74	14.79	14.84	14.88	14.93
Open Circuit Voltage Voc(V)	50.80	51.00	51.20	51.40	51.60	51.80
Short Circuit Current Isc(A)	15.50	15.55	15.60	15.65	15.70	15.75
Module Efficiency (%)	22.18	22.36	22.54	22.72	22.90	23.07

*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 $\pm$ 2°C, AM 1.5

*Measuring uncertainty: $\pm$ 3%, all the electrical characteristics such as Power, Im, Vm and FF are within $\pm$ 3% tolerance.

MECHANICAL DATA

Solar cells	N-type Monocrystalline, Rectangular cells
Cells orientation	144 (6 $\times$ 24)
Module dimension	2465 $\times$ 1134 $\times$ 35mm (With Frame)
Weight	34.5 $\pm$ 1.0 kg
Glass	2.0 mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction box	IP 68, 3 diodes
Cables	4 mm ² , 350mm (With Connectors)
Connectors*	MC4-EVO2 compatible

*Please refer to regional datasheet for specified connector

ELECTRICAL CHARACTERISTICS | NMOT

Maximum Power Pmax(Wp)	471.40	475.10	478.90	482.70	486.20	490.00
Maximum Power Voltage Vmp(V)	39.70	39.90	40.10	40.30	40.40	40.60
Maximum Power Current Imp(A)	11.87	11.91	11.95	11.99	12.02	12.06
Open Circuit Voltage Voc(V)	48.20	48.30	48.50	48.70	48.90	49.10
Short Circuit Current Isc(A)	12.51	12.55	12.59	12.63	12.67	12.71

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

TEMPERATURE RATINGS

NMOT	44°C $\pm$ 2°C
Temperature coefficient of Pmax	(-0.28 $\pm$ 0.028)%/°C
Temperature coefficient of Voc	-0.23%/°C
Temperature coefficient of Isc	0.045%/°C

*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°C~+85°C
Maximum series fuse	25 A
Front Side Maximum Static Loading	Up to 5400 Pa
Rear Side Maximum Static Loading	Up to 2400 Pa

PACKAGING CONFIGURATION *

Piece/Box	31
Piece/Container(40'HQ)	496

*Customized packaging is available upon request.

 Add :No. 229 Tongda Avenue Suqian Economic and Technological Development Zone 223800 Suqian City, Jiangsu P.R. China

 Tel: +86 519 6822 0233

 E-mail: info@znshinesolar.com

Note: Specifications included in this datasheet are subject to change without notice.ZNSHINE reserves the right of final interpretation © ZNSHINE SOLAR 2024 | Version: ZXMR-UPLD144 2408.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