

ZNX7-BD144 Series

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

575-605W

POWER RANGE

23.42%

MAXIMUM EFFICIENCY

0.40%

YEARLY DEGRADATION



12 YEARS PRODUCT WARRANTY



30 YEARS OUTPUT GUARANTEE



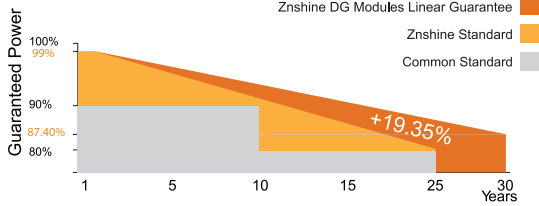
IEC 61215/IEC 61730/IEC 61701/IEC 62716

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.



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

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,



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.



Bifacial Technology

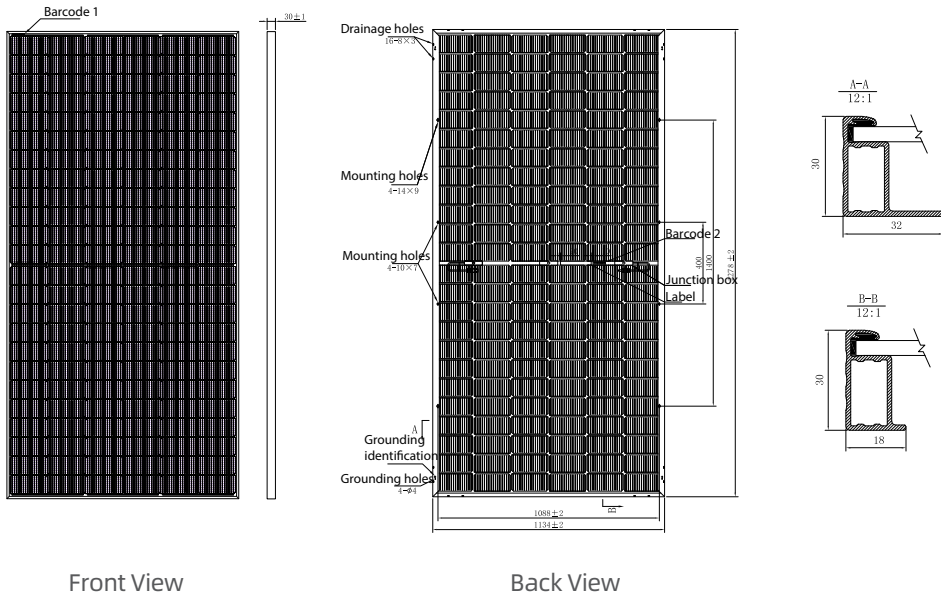
Up to 25% additional power gain from back side depending on albedo.



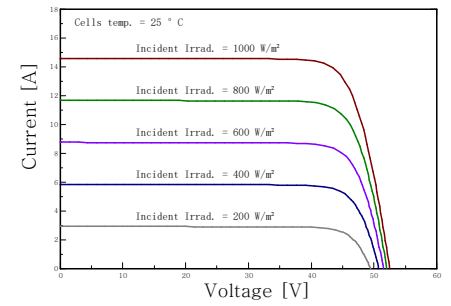
Graphene Coating Technology

The use of graphene coating layer to enhance light transmittance, self-cleaning, and anti-dust to increase solar module power and then increase the power generation capacity.

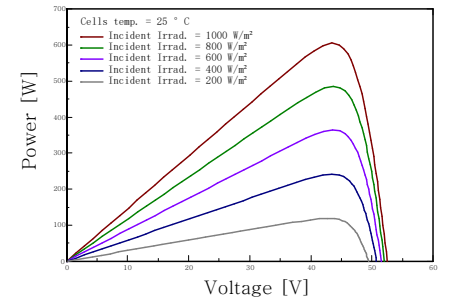
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(605W)



P-V CURVES OF PV MODULE(605W)



*Remark: customized frame color and cable length available upon request
only the classic 16BB assembly diagram is displayed here, other busbar can be customized according to requirements

ELECTRICAL CHARACTERISTICS | STC*

Nominal Power Watt Pmax(W)*	575	580	585	590	595	600	605
Maximum Power Voltage Vmp(V)	42.60	42.80	43.00	43.20	43.40	43.60	43.80
Maximum Power Current Imp(A)	13.50	13.56	13.61	13.66	13.71	13.77	13.82
Open Circuit Voltage Voc(V)	51.30	51.50	51.70	51.90	52.10	52.30	52.50
Short Circuit Current Isc(A)	14.29	14.35	14.41	14.46	14.51	14.56	14.61
Module Efficiency (%)	22.26	22.45	22.65	22.84	23.03	23.23	23.42

*The data above is for reference only and the actual data is in accordance with the practical testing
*STC (Standard Test Condition): Irradiance 1000W/m, Module Temperature 25±2°C, AM 1.5
*Measuring uncertainty: ±3%, Power tolerance: ±3%
*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.
*All the electrical characteristics such as Im, Vm, Isc, Voc and FF are within ±5% tolerance.

MECHANICAL DATA

Solar cells	N-type Monocrystalline
Cells orientation	144 (6×24)
Module dimension	2278×1134×30 mm (With Frame)
Weight	31.0±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 , +300mm, -200mm or Customized Length(with connectors)
Connectors	MC4 Compatible or MC4 EVO2

ELECTRICAL CHARACTERISTICS | NMOT*

Maximum Power Pmax(Wp)	433.90	437.80	441.40	447.10	450.80	454.60	458.30
Maximum Power Voltage Vmp(V)	40.00	40.20	40.40	40.40	40.60	40.80	41.00
Maximum Power Current Imp(A)	10.83	10.88	10.93	11.07	11.11	11.15	11.19
Open Circuit Voltage Voc(V)	48.40	48.60	48.80	49.00	49.20	49.40	49.60
Short Circuit Current Isc(A)	11.53	11.58	11.63	11.67	11.71	11.75	11.79

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

TEMPERATURE RATINGS

NMOT	44°C ±2°C
Temperature coefficient of Pmax	(-0.30±0.03)%/°C
Temperature coefficient of Voc	-0.25%/°C
Temperature coefficient of Isc	0.046%/°C
Refer. Bifacial Factor	(80±10)%

WORKING CONDITIONS

Maximum system voltage	1500 V DC
Operating temperature	-40°C~+85°C
Maximum series fuse	30 A
Front Side Maximum Static Loading	Up to 5400Pa
Rear Side Maximum Static Loading	Up to 2400Pa

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

ELECTRICAL CHARACTERISTICS (REAR POWER GAIN)

5%	Maximum Power: Pmax(W)	604	609	614	620	625	630	635
	Module Efficiency(%)	23.37	23.57	23.78	23.98	24.18	24.39	24.59
15%	Maximum Power: Pmax(W)	661	667	673	679	684	690	696
	Module Efficiency(%)	25.60	25.82	26.04	26.27	26.49	26.71	26.93
25%	Maximum Power: Pmax(W)	719	725	731	738	744	750	756
	Module Efficiency(%)	27.82	28.07	28.31	28.55	28.79	29.03	29.28

PACKAGING CONFIGURATION

Piece/Box	36
Piece/Container(40'HQ)	720