ZXM8-TPLDD120 Series

ZNSHINESOLAR

Znshinesolar 12BB HALF-CELL Bifacial Light-Weight
Double Glass Monocrystalline PERC PV Module

580W | 585W | 590W | 595W | 600W | 605W

Excellent cells efficiency

MBB technology decreases the distance between busbar 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

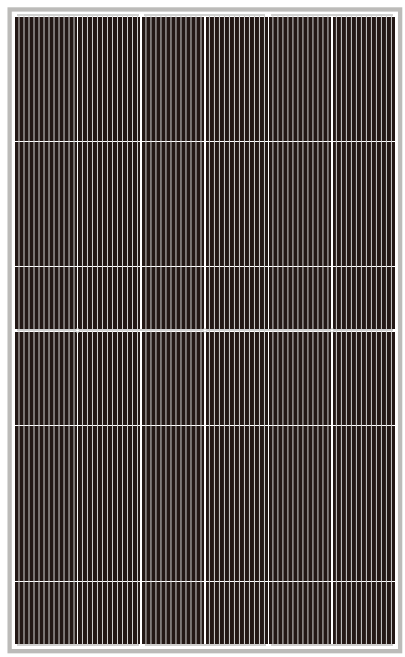
Global,Tier 1 bankable brand,with independently certified state-of-the-art automated manufacturing.

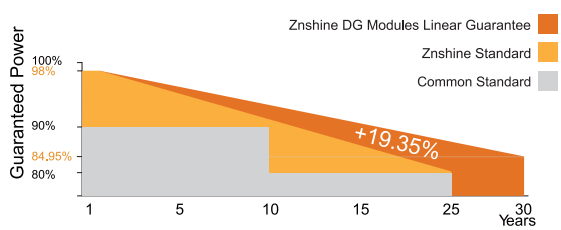
Excellent Quality Managerment System

Warranted reliability and stringent quality assurances well beyond certified requirements.

Bifacial Technology

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





12 years product guarantee
30 years output guarantee

0.45% annual degradation
after the first year

IEC61215/IEC61730/IEC61701/IEC62716/UL61730

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO45001: Occupational Health and Safety Management System

Founded in 1988, ZNShine solar is a world's leading high-tech PV module manufacturer.With the state-of-the-art production lines, the company boasts module capacity of 6GW. 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.

www.znshinesolar.gr

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ELECTRICAL CHARACTERISTICS | STC*

Nominal Power Watt Pmax(W)*	580	585	590	595	600	605
Power Output Tolerance Pmax(%)	0~+3	0~+3	0~+3	0~+3	0~+3	0~+3
Maximum Power Voltage Vmp(V)	33.70	33.90	34.10	34.30	34.50	34.70
Maximum Power Current Imp(A)	17.22	17.26	17.31	17.35	17.40	17.44
Open Circuit Voltage Voc(V)	40.70	40.90	41.10	41.30	41.50	41.70
Short Circuit Current Isc(A)	18.17	18.21	18.25	18.29	18.33	18.37
Module Efficiency (%)	20.49	20.67	20.85	21.02	21.20	21.38

*STC (Standard Test Condition): Irradiance 1000W/m², Module Temperature 25℃, AM 1.5
*Measuring tolerance: ±3%

ELECTRICAL CHARACTERISTICS | NMOT*

Maximum Power Pmax(Wp)	436.10	439.70	443.60	447.20	451.10	454.80
Maximum Power Voltage Vmpp(V)	31.60	31.80	32.00	32.20	32.40	32.50
Maximum Power Current Impp(A)	13.80	13.83	13.87	13.90	13.94	13.98
Open Circuit Voltage Voc(V)	38.20	38.40	38.60	38.80	39.00	39.20
Short Circuit Current Isc(A)	14.67	14.70	14.73	14.76	14.80	14.83

*NMOT(Nominal module operating temperature):Irradiance 800W/m²,Ambient Temperature 20℃,AM 1.5,Wind Speed 1m/s

ELECTRICAL CHARACTERISTICS WITH 25% REAR SIDE POWER GAIN

Front power Pmax/W	580	585	590	595	600	605
Total power Pmax/W	725	731	738	744	750	756
Vmp/V(Total)	33.80	34.00	34.20	34.40	34.60	34.80
Imp/A(Total)	21.45	21.51	21.56	21.62	21.68	21.73
Voc/V(Total)	40.80	41.00	41.20	41.40	41.60	40.80
Isc/A(Total)	22.63	22.69	22.74	22.79	22.83	22.89

MECHANICAL DATA

Solar cells	Mono PERC
Cells orientation	120（6×20）
Module dimension	2172×1303×35 mm(With Frame)
Weight	35 kg
Glass	2.0 mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction box	IP 68，3 diodes
Cables	4 mm² ,350 mm
Connectors	MC4-compatible

TEMPERATURE RATINGS

NMOT	43℃ ±2℃
Temperature coefficient of Pmax	-0.34%/℃
Temperature coefficient of Voc	-0.29%/℃
Temperature coefficient of Isc	0.05%/℃
Refer.Bifacial Factor	70±5%

WORKING CONDITIONS

Maximum system voltage	1500 V DC
Operating temperature	-40℃~+85℃
Maximum series fuse	35 A
Maximum load(snow/wind)	5400 Pa / 2400 Pa

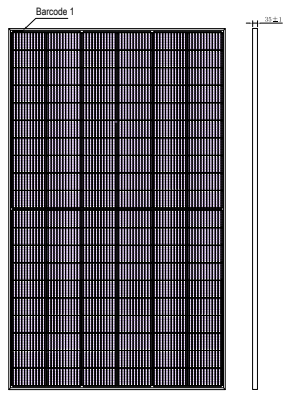
*Do not connect Fuse in Combiner Box with two or more strings in parallel connection
*Remark:Electrical data in this catalog do not refer to a single module and they are not part of the offer.They only serve for comparison among different module types.

PACKAGING CONFIGURATION

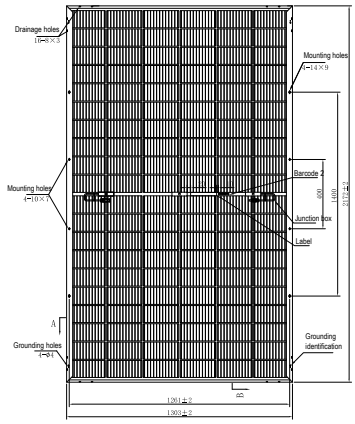
Piece/Box	31
Piece/Container(40'HQ)	558
Piece/Container(with additional small package)	/

*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.

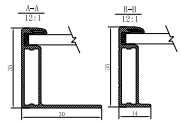
DIMENSIONS(MM)



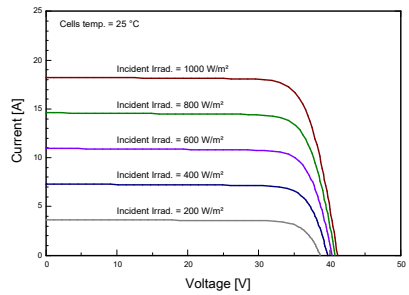
Front View



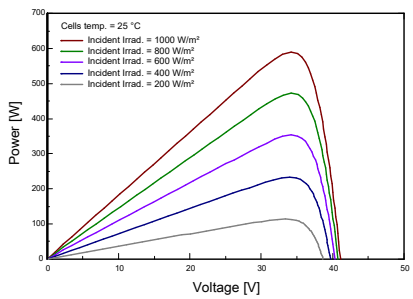
Back View



I-V CURVES OF PV MODULE(590W)



P-V CURVES OF PV MODULE(590W)



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