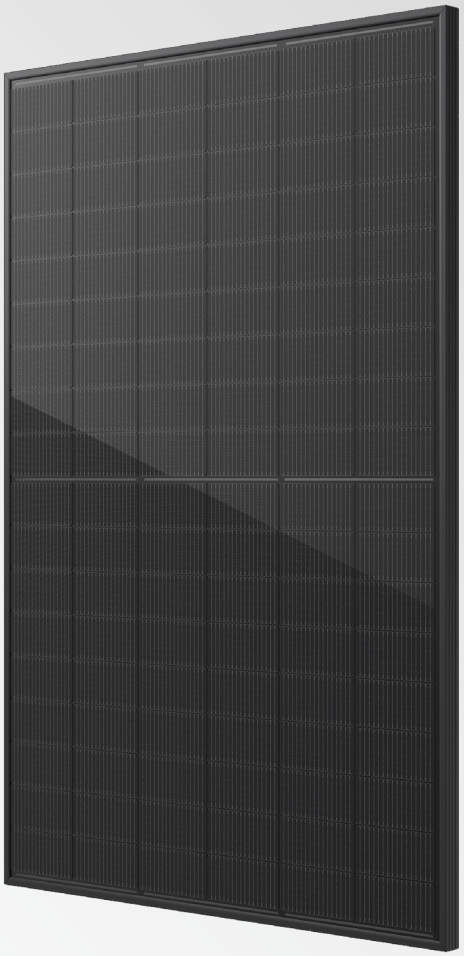
Making more power

HiMAX 5N

430-450W

SP450M-54H

N-type HJT Ultra Black Solar Module



HJT 2.0 Technology

Combining gettering process and single-side μc-Si technology to ensure higher cell efficiency and higher module power.

-0.26%/°C Pmax temperature coefficient

More stable power generation performance and even better in hot climate.

SMBB design with Half-Cut Technology

Shorter current transmission distance, less resistive loss and higher cell efficiency.

Up to 90% Bifaciality

Natrual symmetrical bifacial structure bringing more energy yield from the backside.

Sealing with PIB based sealant

Stronger water resistance, greater air impermeability to extent module lifespan.

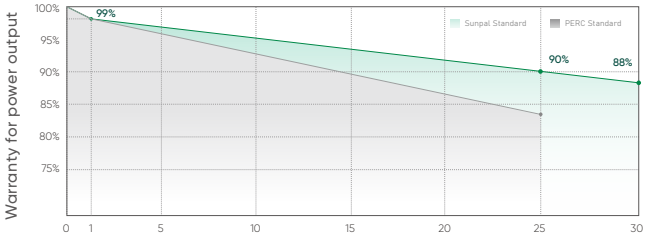
Quality Management System and Product Certification

IEC61215/61730, IEC62804(PID), IEC61701(Salt).
IEC62716 (Ammonia), IEC60068-2-68(Sand).
ISO 9001:2015/quality management system.
ISO 14001:2015/environmental management system.
ISO 45001:2018/occupation health safety management system.
ISO 50001:2011/energy management system.
IEC TS 62941-2016/PV industry quality management system.

Quality Guarantee

25 YEAR Materials Warranty

30 YEAR Power Warranty



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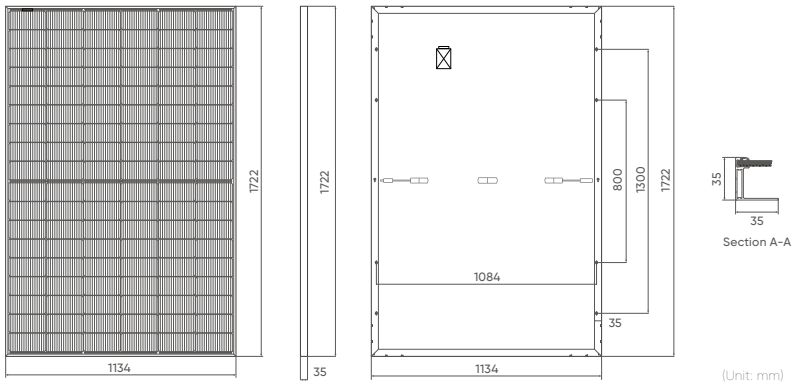
Drawings



Product Image

Mechanical Characteristics

Solar Cells	N-type Mono
No. of Cells	108 (6×18)
Dimensions	1722 × 1134 × 35mm
Weight	21.0kg
Front Glass	3.2mm coated tempered glass
Frame	Anodized aluminium alloy
Junction Box	Ip68 rated (3 by pass diodes)
Output Cables	4mm , 300mm (+) / 300mm (-), Length can be customized
Connectors	Mc4 compatible
M echanical load test	5400Pa
Packaging	31pcs/box, 186pcs/20'GP, 806pcs/40'HQ

Operating Characteristics

Operating Module Temperature	-40°C to +85°C
Maximun System Voltage	1500 DC (IEC)
Maximun Series Fuse Rating	25A
Power Tolerance	0/+5W

Temperature Characteristics

Nominal Operating Temperature (NMOT)	44±2°C
Temperature Coefficient of Pmax	-0.26%°C
Temperature Coefficient of Voc	-0.24%°C
Temperature Coefficient of Isc	+0.04%°C

Electrical Parameters (STC*)

Module Type: **SP450M-54H**	430	435	440	445	450
Maximum power (Pmax/W)	430	435	440	445	450
Open Circuit Voltage (Voc/V)	41.37	41.64	41.91	42.18	42.44
Short Circuit Current (Isc/A)	12.95	13.00	13.05	13.10	13.15
Voltage at Maximum power (Vmpp/V)	34.60	34.86	35.12	35.38	35.63
Current Maximum Power (Impp/A)	12.43	12.48	12.53	12.58	12.63
MODULE EFFICIENCY (%)	22.02	22.28	22.53	22.79	23.04

Electrical Parameters (NMOT*)

Maximum power (Pmax)	327	331	335	338	342
Open Circuit Voltage (Voc/V)	39.48	39.74	40.00	40.26	40.50
Short Circuit Current (Isc/A)	10.44	10.48	10.52	10.56	10.60
Voltage at Maximum power (Vmpp/V)	32.64	32.91	33.17	33.34	33.60
Current Maximum Power (Impp/A)	10.02	10.06	10.10	10.14	10.18

1. Standard Test Conditions [STC]: irradiance 1000W/m2; AM 1.5; ambient temperature 25°C according to EN 60904-3;
2. Nominal Module Operating Temperature (NMOT): Irradiance 800W/m2; wind speed 1m/s , ambient temperature 20°C.
3. Tolerance of Pm: 0~+5W, Measuring uncertainty of power: ±3%. Performance deviation of Voc [V], Isc [A], Vm [V] and Im [A]: ±3%.

I-V Curve