

MT5N

430-450W

N-type HJT Black Frame
Solar Module

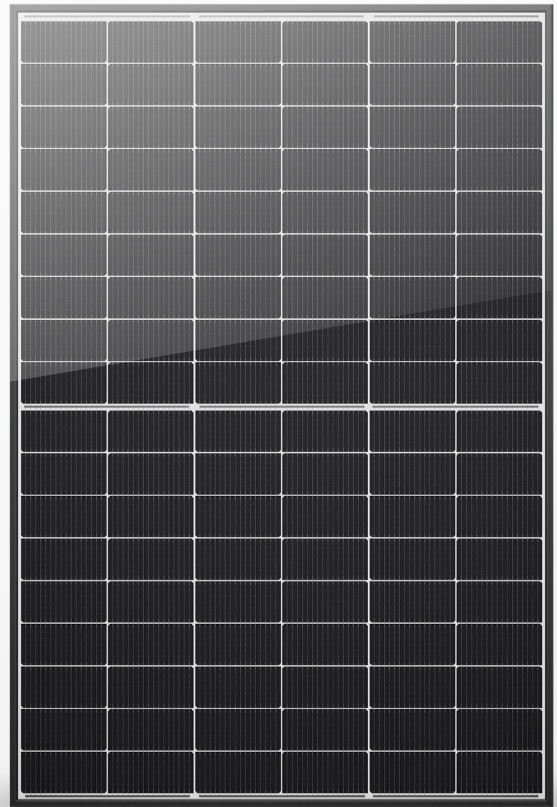
Qualidade Garantida

25-Year Warranty for Materials and Processing

30-Year Warranty for Extra Linear Power Output

23.04%

Max. Module Efficiency



MS-54H

HJT 2.0 Technology

Combining gettering process and single-side uc-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

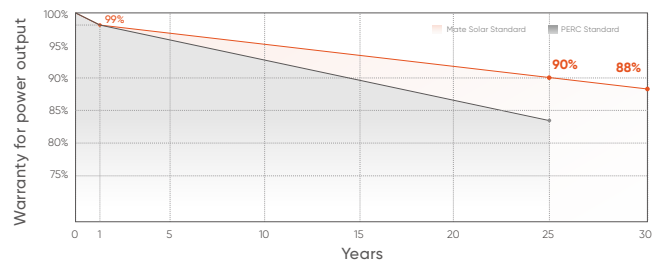
Shorter current transmission distance, less resistive loss and higher cell efficiency.

Up to 90% Bifaciality

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

Sealing with PIB based sealant

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



* Please refer to Mate Solar standard warranty for details

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.

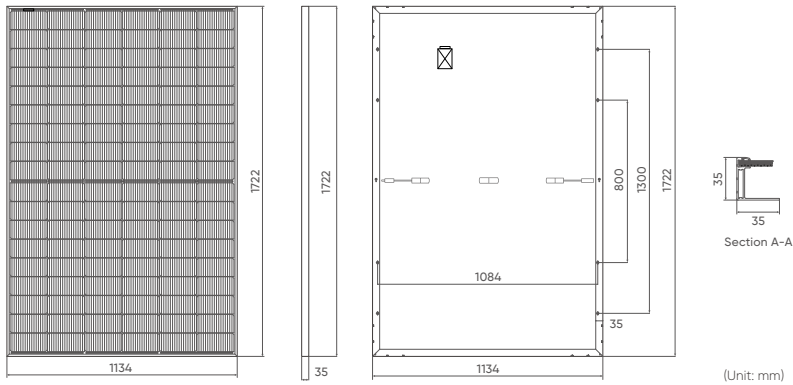
ISO 45001:2018/occupation health safety management system

ISO 50001:2011/energy management system.

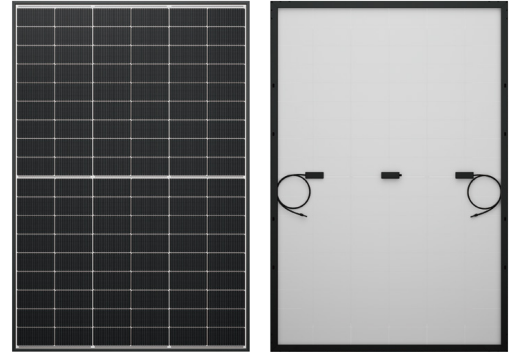
IEC TS 62941-2016/PV industry quality management system .



Drawings



Product Image



Mechanical Parameters

Solar Cells	N-type Mono
No. of Cells	108 (6×18)
Dimensions	1722 × 1134 × 30mm
Weight	21.0kg
Front Glass	3.2mm coated tempered glass
Frame	Black Anodized aluminium alloy
Junction Box	Ip68 rated (3 by pass diodes)
Output Cables	4mm ² , 300mm (+) / 300mm (-), Length can be customized
Connectors	Mc4 compatible
Mechanical load test	5400Pa
Packaging	36pcs/box, 216pcs/20'GP, 936pcs/40'HQ

Operating Characteristics

Operating Module Temperature	-40°C to +85°C
Maximum System Voltage	1500 DC (IEC)
Maximum 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 Characteristics (STC*)

Module Type: MS-54H	430	435	440	445	450
Maximum power (Pmax/W)	430	435	440	445	450
Open Circuit Voltage (Voc/V)	40.30	40.56	40.83	41.09	41.34
Short Circuit Current (Isc/A)	13.30	13.35	13.40	13.45	13.50
Voltage at Maximum power (Vmpp/V)	33.49	33.75	34.01	34.26	34.51
Current Maximum Power (Impp/A)	12.84	12.89	12.94	12.99	13.04
MODULE EFFICIENCY (%)	22.02	22.28	22.53	22.79	23.04

Electrical Characteristics (NMOT*)

Maximum Power: Pmax [W]	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: Vmp [V]	32.64	32.91	33.17	33.34	33.60
Current at Maximum Power: Imp [A]	10.02	10.06	10.10	10.14	10.18

- Standard Test Conditions [STC]: irradiance 1000W/m²; AM 1.5; ambient temperature 25°C according to EN 60904-3;
- Nominal Module Operating Temperature (NMOT): Irradiance 800W/m²; wind speed 1m/s, ambient temperature 20°C.
- 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

