

MT5-Pro

470-490W

N-type TOPCon Black Frame
Solar Module

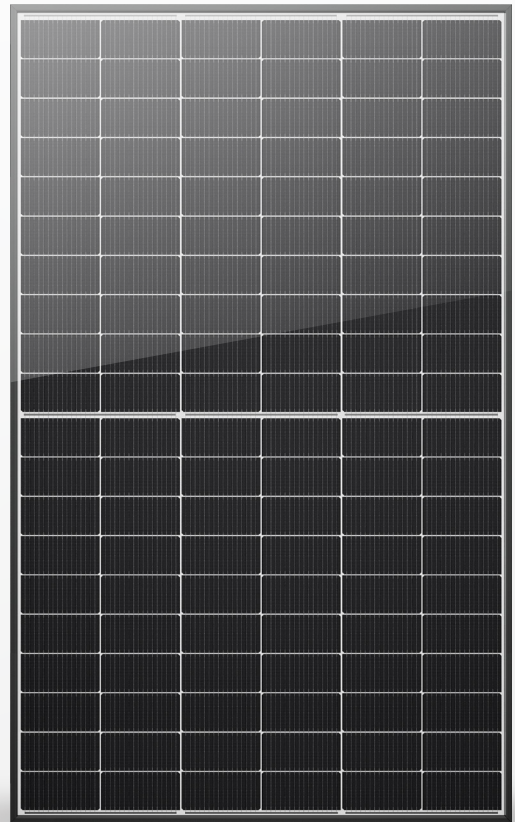
Qualidade Garantida

25-Year Warranty for Materials and Processing

30-Year Warranty for Extra Linear Power Output

22.62%

Max. Module Efficiency



MS-60H

10-30% Additional Power Generation

30 years lifespan brings 10-30% additional power generation comparing with conventional P-type module.

ZERO LID (Light Induced Degradation)

N-type solar cell has no LID naturally which can increase power generation.

Higher Reliability

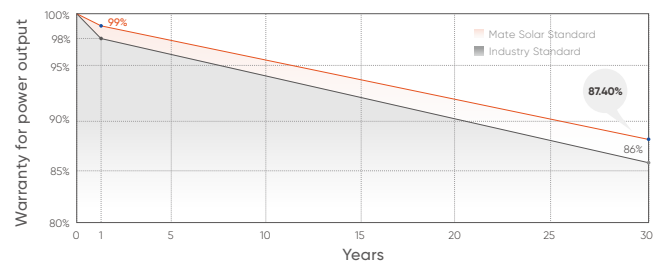
Adopted Mate Solar latest S-TOPCo 2.0 technology,
No polysilicon wrap around, Full electrical isolation,
Zero leakage current; Much Safer for roof.

Better Weak Illumination Response

Higher power output even under low-light environments like on cloudy or foggy days.

Better Temperature Coefficient

Higher power generation under working conditions, thanks to passivating contact cell technology.



* 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.

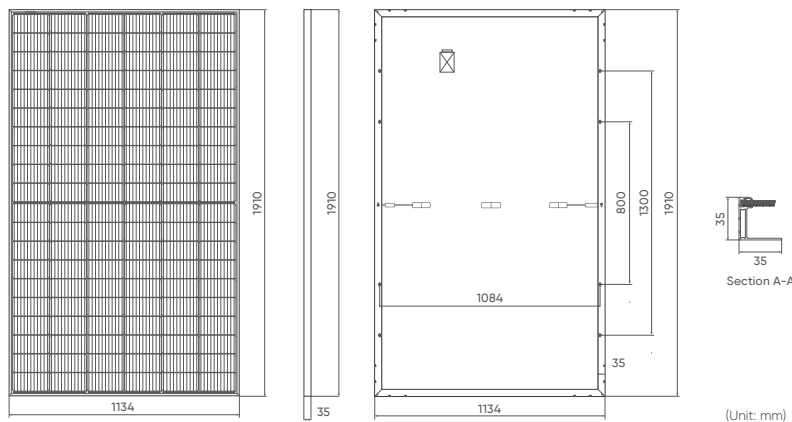
ISO 45001:2018/occupation health safety management system

ISO 50001:2011/energy management system.

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



Drawings



Mechanical Parameters

Solar Cells	N-type Mono
No. of Cells	120 (6×20)
Dimensions	1910 × 1134 × 30mm
Weight	23.0kg
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, 864pcs/40'HQ

Electrical Characteristics (STC*)

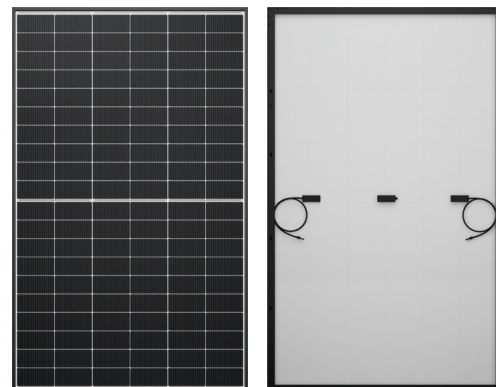
Module Type: MS-60H	470	475	480	485	490
Maximum power (Pmax/W)	470	475	480	485	490
Open Circuit Voltage (Voc/V)	43.29	43.45	43.60	43.76	43.91
Short Circuit Current (Isc/A)	13.69	13.77	13.85	13.93	14.01
Voltage at Maximum power (Vmpp/V)	35.69	35.88	36.06	36.25	36.43
Current Maximum Power (Impp/A)	13.17	13.24	13.31	13.38	13.45
MODULE EFFICIENCY (%)	21.70	21.93	22.16	22.39	22.62

Electrical Characteristics (NMOT*)

Maximum Power: Pmax [W]	353	357	361	365	369
Open Circuit Voltage: Voc [V]	41.12	41.27	41.42	41.57	41.71
Short Circuit Current: Isc [A]	11.06	11.12	11.18	11.24	11.31
Voltage at Maximum Power: Vmp [V]	33.24	33.43	33.61	33.84	34.00
Current at Maximum Power: Imp [A]	10.62	10.68	10.74	10.80	10.86

- 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%.

Product Image



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)	45±2°C
Temperature Coefficient of Pmax	-0.30%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.046%/°C

I-V CURVE

