

MT5-Pro

475-495W

N-type TOPCon Full Black
Bifacial Dual Glass Solar Module

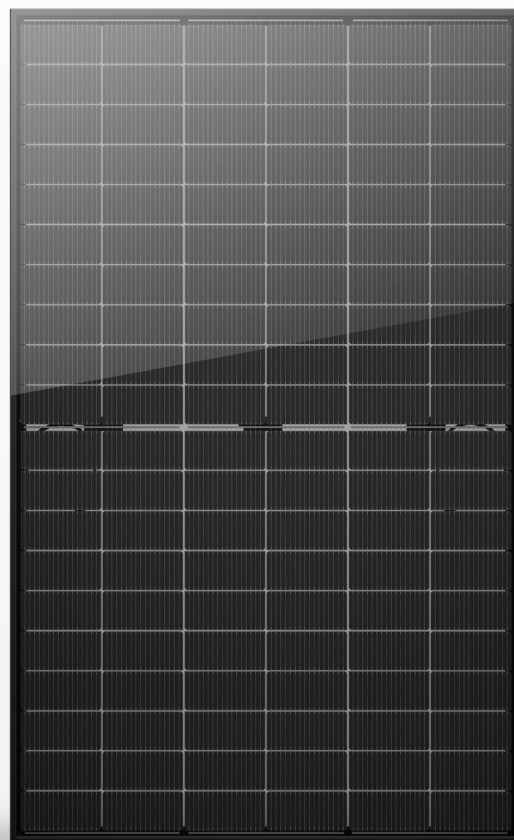
Qualidade Garantida

25-Year Warranty for Materials and Processing

30-Year Warranty for Extra Linear Power Output

22.85%

Max. Module Efficiency



MS-60HB

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

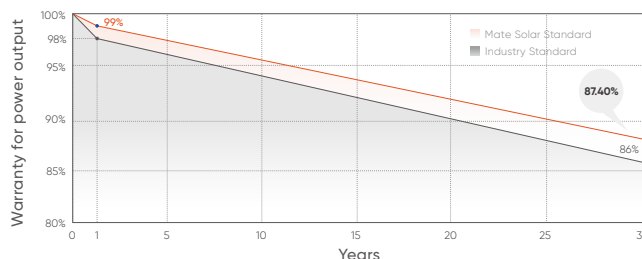
Adopted Mate Solar latest S-TOPCo 2.0 technology,
No polysilicon wrap around, Full electrical isolation,
Zero leakage current; Much Safer for roof.

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.

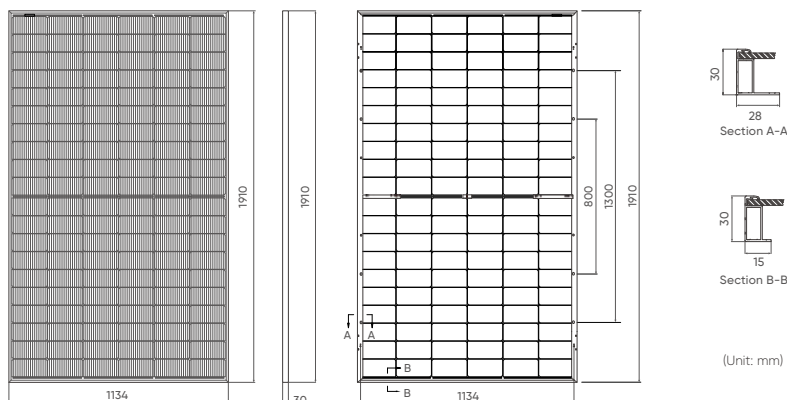
ISO 45001:2018/occupation health safety management system

ISO 50001:2011/energy management system.

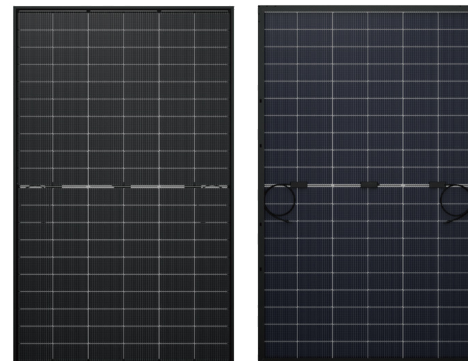
IEC TS 62941-2016/PV industry quality management system .



Drawings



Product Image



Mechanical Parameters

Solar Cells	N-type Mono
No. of Cells	120 (6x20)
Dimensions	1910 x 1134 x 30mm
Weight	26.0kg
Glass	Front: 2.0mm coated semi-tempered glass; Back: 2.0mm semi-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

Operating Characteristics

Operating Module Temperature	-40°C to +85°C
Maximum System Voltage	1500 DC (IEC)
Maximum Series Fuse Rating	30A
Power Tolerance	0/+5W

Temperature Characteristics

Nominal Operating Temperature (NMOT)	45±2°C
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.045%/°C

Electrical Characteristics (STC*)

Module Type: MS-60HB	475	480	485	490	495
Maximum power (Pmax/W)	475	480	485	490	495
Open Circuit Voltage (Voc/V)	43.45	43.6	43.76	43.91	44.06
Short Circuit Current (Isc/A)	13.77	13.85	13.93	14.01	14.09
Voltage at Maximum power (Vmpp/V)	35.88	36.06	36.25	36.43	36.62
Current Maximum Power (Impp/A)	13.24	13.31	13.38	13.45	13.52
MODULE EFFICIENCY (%)	21.93	22.16	22.39	22.62	22.85

Bifacial Output-Rearside Power Gain

5%	Maximum Power (Pmax/W)	499	504	509	515	520
	Module Efficiency STC (%)	23.03	23.27	23.51	23.75	24.00
15%	Maximum Power (Pmax/W)	546	552	558	564	569
	Module Efficiency STC (%)	25.22	25.49	25.75	26.02	26.28
25%	Maximum Power (Pmax/W)	594	600	606	613	619
	Module Efficiency STC (%)	27.41	27.70	27.99	28.28	28.57

1. Standard Test Conditions [STC]: irradiance 1000W/m²; AM 1.5; ambient temperature 25°C according to EN 60904-3;
 2. 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

