

MT5-Pro

625-645W

N-type TOPCon Full Black
Bifacial Dual Glass Solar Module

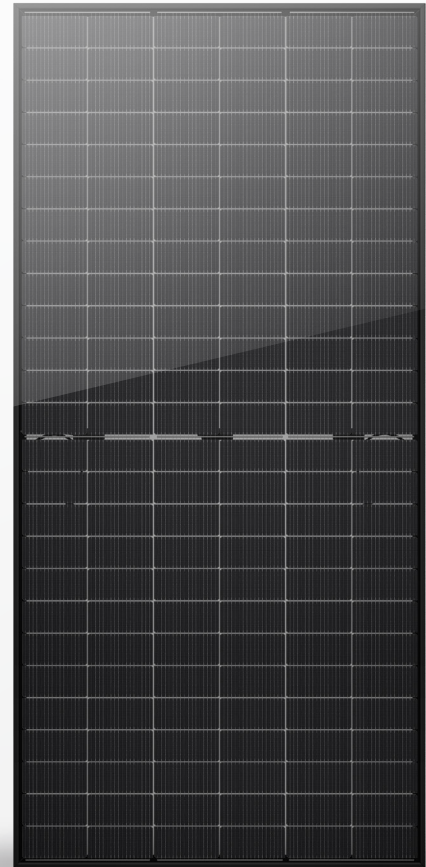
Qualidade Garantida

25-Year Warranty for Materials and Processing

30-Year Warranty for Extra Linear Power Output

23.07%

Max. Module Efficiency



MS-78HB

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

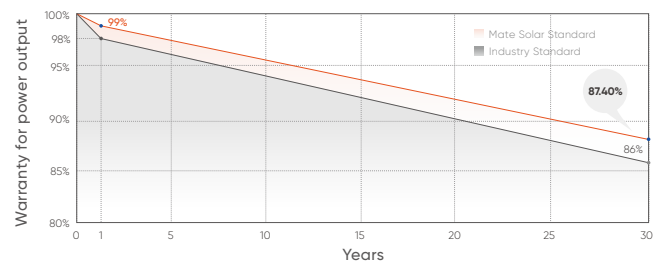
Adopted Mate Solar latest S-TOPCo 2.0 technology,
No polysilicon wrap around, Full electrical isolation,
Zero leakage current; Much Safer for roof.

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.

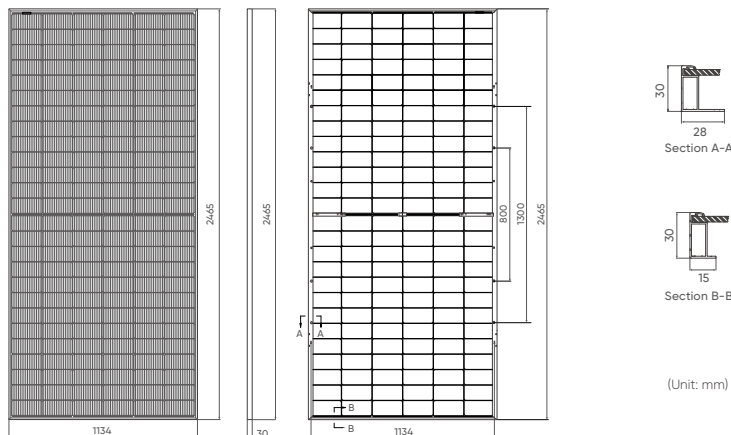
ISO 45001:2018/occupation health safety management system

ISO 50001:2011/energy management system.

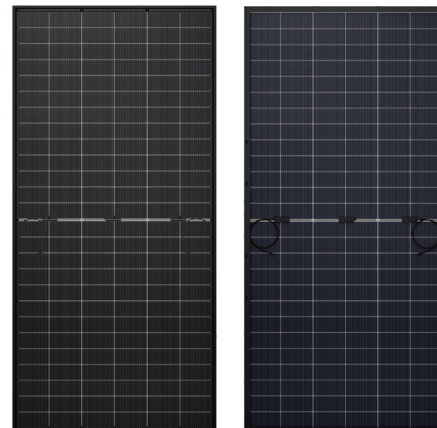
IEC TS 62941-2016/PV industry quality management system .



Drawings



Product Image



Mechanical Parameters

Solar Cells	N-type Mono
No. of Cells	156 (6x26)
Dimensions	2465 x 1134 x 30mm
Weight	34.5kg
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, 144pcs/20'GP, 576pcs/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

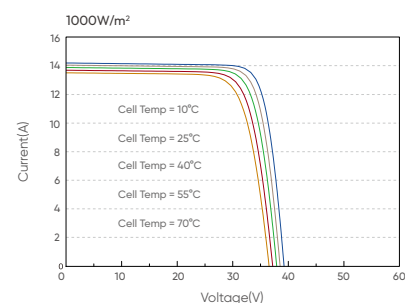
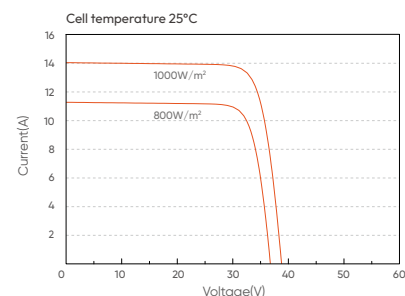
Temperature Characteristics

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-78HB	625	630	635	640	645
Maximum power (Pmax/W)	625	630	635	640	645
Open Circuit Voltage (Voc/V)	56.55	56.70	56.85	57.00	57.15
Short Circuit Current (Isc/A)	13.92	13.98	14.04	14.10	14.16
Voltage at Maximum power (Vmpp/V)	47.14	47.30	47.46	47.62	47.78
Current Maximum Power (Impp/A)	13.26	13.32	13.38	13.44	13.50
MODULE EFFICIENCY (%)	22.36	22.54	22.72	22.90	23.07

I-V Curve



Bifacial Output-Rearside Power Gain

5%	Maximum Power (Pmax/W)	656	662	667	672	677
	Module Efficiency STC (%)	23.48	23.66	23.85	24.04	24.23
15%	Maximum Power (Pmax/W)	719	725	730	736	742
	Module Efficiency STC (%)	25.71	25.92	26.12	26.33	26.54
25%	Maximum Power (Pmax/W)	781	788	794	800	806
	Module Efficiency STC (%)	27.95	28.17	28.40	28.62	28.84

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%.