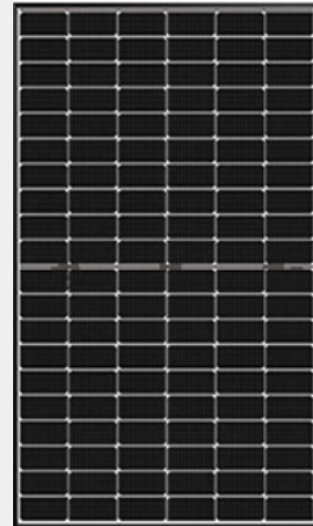


460~480 Watt

Transparent glass

Black frame frame available

TOPCon



MG-470TD

Key Features



High Efficiency

Leading module efficiency in industry, up to 22.3%



Half Cell, SMBB Technology

Series-then-parallel cell connection design, more reliable soldering technology



High Reliability

Two times EL/Critical Visual inspection



Excellent Anti-PID Performance

2 times of industry standard Anti-PID test



Excellent Rear Side Power Generation

Bifaciality is up to 70%, up to 25% more energy yield than conventional modules



Superior Low Irradiance Performance

Excellent low irradiance performance, increase power generation in low-light conditions like mornings, evenings and cloudy days

Product and Quality Certifications

IEC 61215, IEC 61730

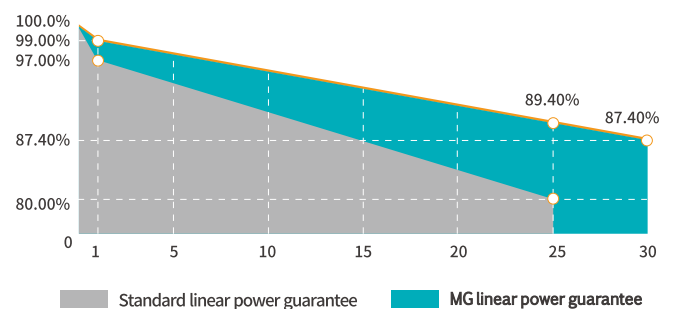
ISO 9001: Quality Management System

ISO 14001: Environment Management System

ISO 45001: Occupational Health and Safety Management System

IEC 62716, IEC 61701: Ammonia, Salt mist corrosion test

IEC TS 62804-1, IEC 60068-2-68: PID test, Dust and Sand test



Electrical Characteristics (STC/NOCT)

Front Side	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power- Pmax(W)	460	346	465	350	470	353	475	357	480	361
Open Circuit Voltage - Voc(V)	42.27	39.94	42.72	40.10	43.17	40.25	43.28	40.41	43.62	40.57
Short- Circuit Current - Isc(A)	13.71	11.29	13.73	11.36	13.57	11.42	13.59	11.49	13.62	11.55
Voltage at Pmax -Vmp(V)	35.39	33.60	35.72	32.77	36.21	32.94	36.51	33.10	36.81	33.27
Current at Pmax - Imp(A)	13	10.61	13.02	10.67	12.98	10.73	13.01	10.79	13.04	10.85
Module Efficiency - η m(%)	21.32	/	21.55	/	21.78	/	22.01	/	22.24	/
Power Tolerance(W)	(0, +4.99W)									
Maximum System Voltage(V)	1500Vdc (IEC / UL)									
Maximum Series Fuse Rating (A)	25A									

STC : Irradiance 1000W/m², Cell Temperature 25°C, Air Mass 1.5

NOCT : Irradiance 800W/m², Ambient Temperature 20°C, Air Mass 1.5, Wind Speed 1m/s

Mechanical Specifications

External Dimensions	1909x1134x30mm
Weight	25.9kg
Solar Cells	N-Type 16BB 182mm (2x60pcs)
Front Glass	AR Coated 2+2 mm tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68
Output Cables	4.0mm ² , 1200mm (+), 1200mm (-), length can be customized
Connector	MC4 Compatible
Mechanical Load	Front Side Max. 5400Pa, Rear Side Max. 2400Pa

Temperature Characteristics

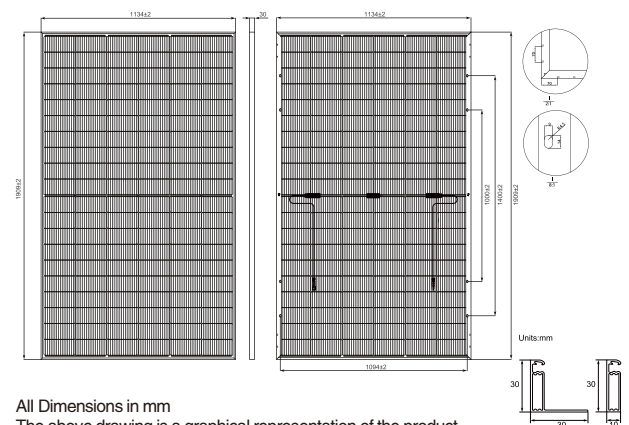
Short Circuit Current(Isc)	+0.045%/°C
Open Circuit Voltage(Voc)	-0.250%/°C
Nominal Max. Power(Pmax)	-0.300%/°C
NMOT	42 ± 2°C

Packing Configuration

	1909x1134x30mm	
Container	20'GP	40'HQ
Pieces per Pallet	36	36
Pallets per Container	5	24
Pieces per Container	216	864

Bifacial Output Rear Side Power Gain

Power Gain	5%	15%	25%
Maximum Power- Pmax(W)	493.5	540.5	587.5
Open Circuit Voltage - Voc(V)	42.52	42.54	42.55
Short- Circuit Current - Isc(A)	14.81	16.21	17.61
Voltage at Pmax -Vmp(V)	35.19	35.21	35.22
Current at Pmax - Imp(A)	14.03	15.35	16.68



All Dimensions in mm
The above drawing is a graphical representation of the product.
For engineering quality drawings please contact MogenSolar.

Current-Voltage & Power-Voltage Curves

