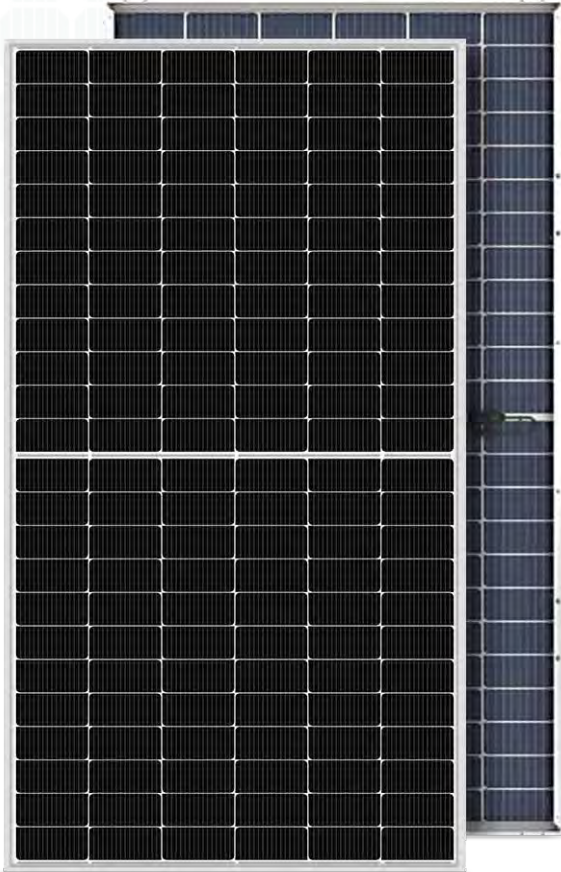




GreensunSolar



N-Type TOPCON

GSM-M10/144NHBD 570-590W

**N-Type TOPCON
Bifacial Dual Glass
MonoSilicon PV Module**

590W

Maximum Power
Output

22.83%

Maximum Module
Efficiency

0~+5W

Power Output
Guarantee



N-type Topcon technology for lower LCOE

The lower temperature coefficient and better low irradiance performance of Topcon technology can effectively reduce LCOE.



Double-sided power generation, higher yield

The dual-glass module has a double-sided ratio of up to 80% and a power generation gain of 7%-25% on the back side.



Ultra-low Degradation, longer warranty, higher output

- First-year degradation 1% and annual degradation at 0.4%
- Up to 25 years product warranty and 30 years power warranty



Universal solution for residential and C&I application

- Easy for integration, designed for compatibility with existing mainstream inverters and diverse mounting systems
- Perfect size and low weight for handling and installation
- Most valuable solution on low load capacity rooftops (weight similar to backsheet version)
- Mechanical performance up to 5400 Pa positive load and 4000 Pa negative load



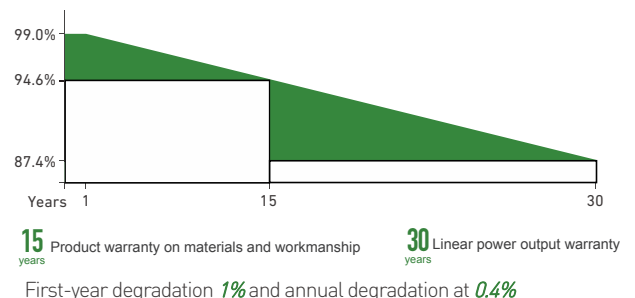
PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.

Delivers Reliable Performance Over Time

- manufacturer of crystalline silicon photovoltaic modules
- Fully automatic facility and world-class technology
- Rigorous quality control to meet the highest standard: ISO9001:2015, ISO14001: 2015 and OHSAS: 18001 2007
- Tested for harsh environments (salt mist, ammonia corrosion and sand blowing test: IEC 61701, IEC 62716, DIN EN 60068-2- 68)
- Long term reliability tests
- 2x100% EL inspection ensuring defect-free modules

Linear Performance Warranty



Greensun Solar Energy Tech Co., Limited
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Electrical Specification (STC*)

Maximum Power	P _{max} (W)	570	575	580	585	590
Maximum Power Voltage	V _{mp} (V)	42.29	42.44	42.59	42.74	42.89
Maximum Power Current	I _{mp} (A)	13.48	13.55	13.62	13.69	13.76
Open Circuit Voltage	V _{oc} (V)	51.07	51.27	51.47	51.67	51.87
Short Circuit Current	I _{sc} (A)	14.25	14.31	14.37	14.43	14.49
Module Efficiency	(%)	22.07	22.26	22.45	22.64	22.83
Power Output Tolerance	(W)	0~+5				

* Irradiance 1000W/m², Module Temperature 25°C, Air Mass 1.5

Electrical Specification (NOCT*)

Maximum Power	P _{max} (W)	429	432	436	440	444
Maximum Power Voltage	V _{mp} (V)	39.65	39.78	39.87	39.96	40.05
Maximum Power Current	I _{mp} (A)	10.81	10.87	10.94	11.01	11.08
Open Circuit Voltage	V _{oc} (V)	48.51	48.70	48.89	49.08	49.27
Short Circuit Current	I _{sc} (A)	11.50	11.55	11.60	11.65	11.70

* Irradiance 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s

Mechanical Data

Number of Cells	144 Cells (6×24)
Dimensions of Module L*W*H (mm)	2278×1134×30mm
Weight (kg)	32.0 kg
Front Side Glass	High transparency solar glass 2.0mm
Back Side Glass	High transparency solar glass 2.0mm
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm ² (0.006 inches ²), 300mm (11.8 inches)
Number of diodes	3
Wind/ Snow Load	4000Pa/ 5400Pa*
Connector	MC Compatible

* For more details please check the installation manual

Temperature Ratings

Nominal Operating Cell Temperature [NOCT]	45±2°C
Temperature Coefficient of I _{sc}	+0.040%/°C
Temperature Coefficient of V _{oc}	-0.240%/°C
Temperature Coefficient of P _{MAX}	-0.300%/°C

Maximum Ratings

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Max Series Fuse Rating	25A

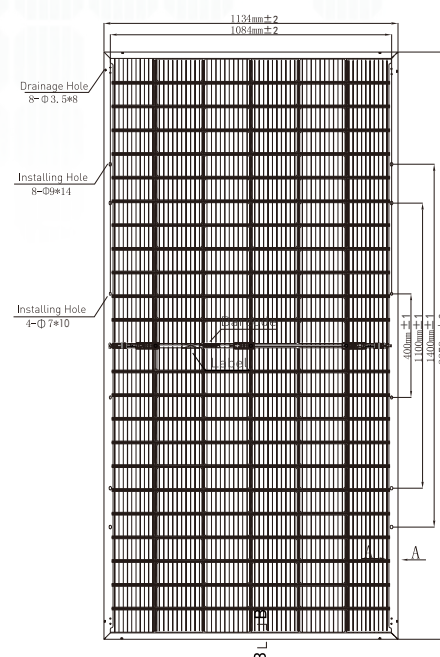
Packaging Configuration

Module per box	36 pieces
Module per 40' container	720 pieces

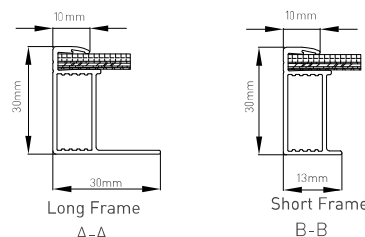
Optional

Connector	MC Original
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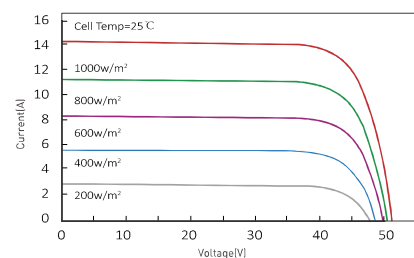
Module Dimension



Back View



I-V Curve at Different Temperature (570W)



I-V/P-V Curve at Different Irradiation (570W)

