



N-Type

GSM-M10/108H 420-440W

N-Type TOPCON

All Black

Mono Silicon PV Module

440W

Maximum Power Output

22.53%

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.



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



PID Resistance

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



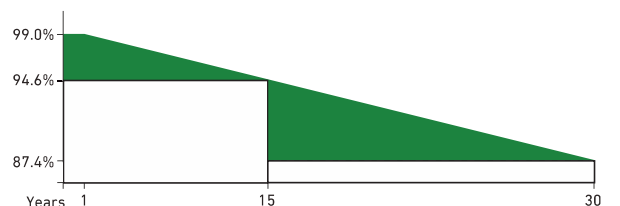
Universal solution for residential and C&I application

- 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

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



15 years Product warranty on materials and workmanship

30 years Linear power output warranty

First-year degradation **1%** and annual degradation at **0.4%**

Electrical Specification (STC*)

Maximum Power	P _{max} [W]	420	425	430	435	440
Maximum Power Voltage	V _{mp} [V]	31.51	31.70	31.88	32.07	32.26
Maximum Power Current	I _{mp} [A]	13.33	13.41	13.49	13.57	13.65
Open Circuit Voltage	V _{oc} [V]	38.11	38.30	38.49	38.68	38.87
Short Circuit Current	I _{sc} [A]	14.07	14.15	14.23	14.31	14.39
Module Efficiency	[%]	21.51	21.76	22.02	22.27	22.53
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]	316	320	323	327	331
Maximum Power Voltage	V _{mp} [V]	29.34	29.50	29.63	29.78	29.92
Maximum Power Current	I _{mp} [A]	10.76	10.83	10.91	10.98	11.06
Open Circuit Voltage	V _{oc} [V]	36.20	36.38	36.56	36.74	36.92
Short Circuit Current	I _{sc} [A]	11.36	11.42	11.49	11.55	11.62

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

Mechanical Data

Number of Cells	108 Cells (6×18)
Dimensions of Module L*W*H (mm)	1722×1134×30mm
Weight (kg)	22.0 kg
Front Side Glass	High transparency solar glass 3.2mm
Backsheet	Black
Frame	Black, 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	20A

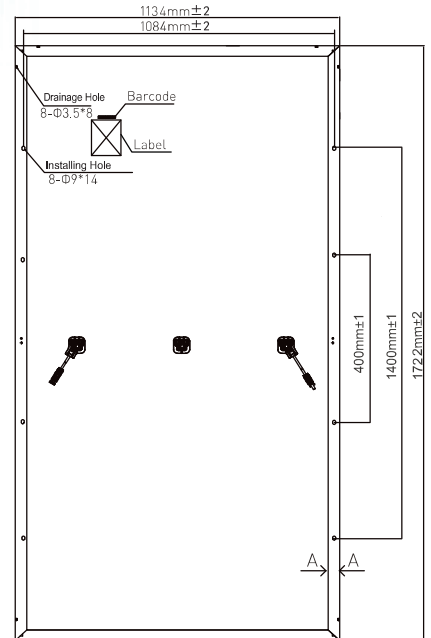
Packaging Configuration

Module per box	37 pieces
Module per 40' container	962 pieces

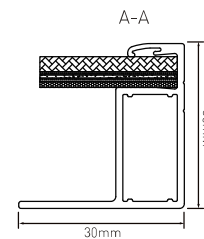
Optional

Connector	<input checked="" type="checkbox"/> MC Original
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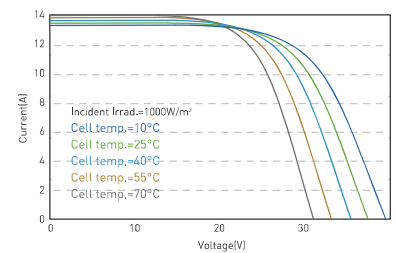
Module Dimension



Back View



I-V Curve at Different Temperature (420W)



I-V/P-V Curve at Different Irradiation (420W)

