



# GSM-M12/132H

## 655-685W

High Efficiency  
Mono Solar Panel  
Half-Cut Technology

Cell Type



12BB(210\*105mm)



**685W**  
Maximum Power Output

**22.1%**  
Maximum Module Efficiency

**0~+5W**  
Power Output Guarantee



Large 210mm silicon wafer high efficiency  
12BB technology for better light trapping effect\* improved current collection



Selected encapsulating material and stringent production process control ensure the product is highly PID resistant and snail trails free



Special cutting and soldering technology leads to low hotspot risk



Sand blowing test, salt mist test and ammonia test passed to endure harsh environments



Optimized system performance due to module level current sorting

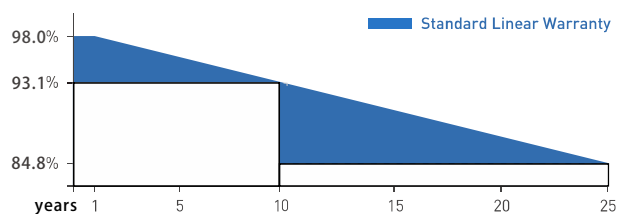


Highly transparent self-cleaning glass brings additional yield and easy maintenance

### 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



12 Years Product Warranty 25 Years Linear Power Warranty

\* Please refer to standard warranty for details

### Product certification



## Electrical Specification (STC\*)

Maximum Power	Pmax(W)	655	660	665	670	675	680	685
Maximum Power Voltage	Vmp(V)	37.6	37.8	38.0	38.2	38.4	38.6	38.8
Maximum Power Current	Imp(A)	17.40	17.44	17.49	17.54	17.58	17.62	17.66
Open Circuit Voltage	Voc(V)	41.4	41.6	41.8	42.0	42.2	42.4	42.6
Short Circuit Current	Isc(A)	18.47	18.52	18.57	18.62	18.67	18.72	18.74
Module Efficiency	(%)	21.0	21.2	21.4	21.5	21.7	21.9	22.1
Power Output Tolerance	(W)							0~+5

\* Irradiance 1000W/m<sup>2</sup>, Module Temperature 25°C, Air Mass 1.5

## Electrical Specification (NOCT\*)

Maximum Power	Pmax (W)	496	500	504	509	513	517	520
Maximum Power Voltage	Vmp (V)	35.1	35.3	35.5	35.7	35.9	36.1	36.3
Maximum Power Current	Imp (A)	14.13	14.18	14.22	14.27	14.31	14.35	14.39
Open Circuit Voltage	Voc(V)	42.8	43.0	43.2	43.4	43.6	43.8	44.0
Short Circuit Current	Isc (A)	14.83	14.92	14.96	15.00	15.04	15.08	15.12

\* Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s

## Mechanical Data

Number of Cells	132 Cells (6×22)
Dimensions of Module L*W*H (mm)	2385×1303×35mm
Weight (kg)	35.7 kg
Glass	High transparency solar glass 3.2mm (0.13 inches)
Backsheet	White
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ), 300mm (11.8 inches)
Number of diodes	3
Wind/ Snow Load	2400Pa/ 5400Pa*
Connector	MC Compatible

\* For more details please check the installation manual

## Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	43±2°C
Temperature Coefficient of Isc	+0.040%/°C
Temperature Coefficient of Voc	-0.250%/°C
Temperature Coefficient of P <sub>MAX</sub>	-0.340%/°C

## Packaging Configuration

Module per box	31 pieces
Module per 40' container	558 pieces

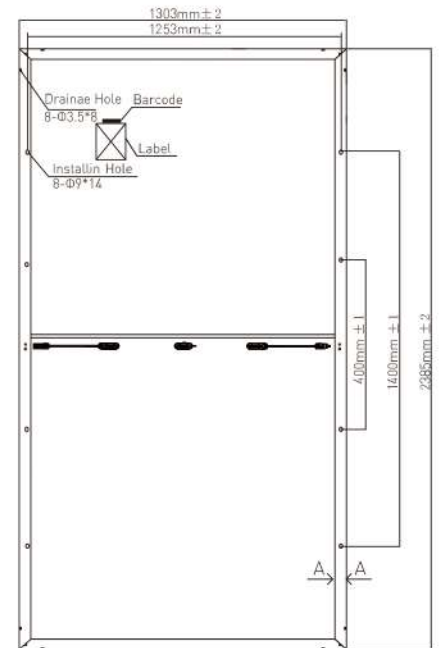
## Maximum Ratings

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC -(H)
Max Series Fuse Rating	30A

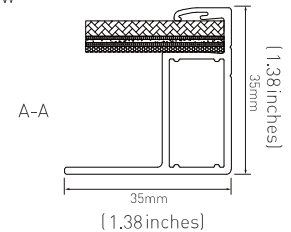
## Optional

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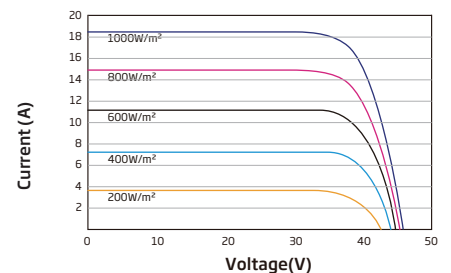
## Module Dimension



## Back View



## I-V CURVES OF PV MODULE(670W)



## P-V CURVES OF PV MODULE(670W)

