

IEC61215(2016), IEC61730(2016)  
 ISO14001: 2015 Environment Management System  
 ISO9001: 2015: Quality Management System  
 ISO45001: 2018: Occupational health and safety management systems

## N-TOPCon Technology

### CHGMN72D1

N-type Mono High Efficiency Double Glass Bifacial PV Module

# 580-605W

605W

Maximum Power Output

23.4%

Maximum Module Efficiency

0~+5W

Positive power tolerance



#### Excellent Power Output

Adopting large-sized, highly efficient cell technology and leading manufacturing processes to effectively enhanced product power



#### Excellent Temperature Coefficient

The product has excellent temperature coefficient, outstanding outdoor power generation performance and longer lifespan



#### Ultra-multi-busbar Technology

Better light utilization and current collection capability, effectively improving product power output and reliability



#### No LeTID/LID

While achieving efficiency gains in N-type photovoltaic cells, virtually no LID loss



#### Excellent Irradiance Response

Superior weak-light power generation performance in environments such as early morning, evening, and cloudy conditions.



#### High Profitability

Effectively reducing the system's BOS costs, achieving lower cost of electricity, and increasing project return



1.0%  
1st year  
degradation



0.4%  
2-30th annual  
degradation



15 Year  
material and  
workmanship  
warranty



30 Year  
linear  
warranty

## Electrical Properties | STC\*

	580	585	590	595	600	605
MPP Voltage (Vmp/V)	44.07	44.28	44.49	44.64	44.78	44.91
MPP Current (Imp/A)	13.16	13.21	13.26	13.33	13.40	13.47
Open Circuit Voltage (Voc/V)	52.52	52.72	52.92	53.12	53.32	53.52
Short Circuit Current (Isc/A)	13.79	13.84	13.89	13.96	14.03	14.10
Module Efficiency (%)	22.5	22.6	22.8	23.0	23.2	23.4

\*STC (Standard Test Conditions): Irradiance 1000 W/m<sup>2</sup>, cell Temperature 25°C, AM 1.5

## Mechanical Properties

Cell Type	n-type half cell
Number of Cells	144pcs(2*72)
Module Dimension	2278mm*1134mm*30mm
Weight	31.4kg
Front / Rear Glass	2.0mm/2.0mm
Frame	Anodized Aluminum Alloy
Junction Box	IP68
Output cables	4.0mm <sup>2</sup> , +300mm/-200mm or Customized Length

## Temperature Coefficient

Temperature coefficients of Pmax	-0.29% / °C
Temperature coefficients of Voc	-0.25% / °C
Temperature coefficients of Isc	+0.045% / °C
Nominal Module Operating Temperature	42±2 °C

## Operating Properties

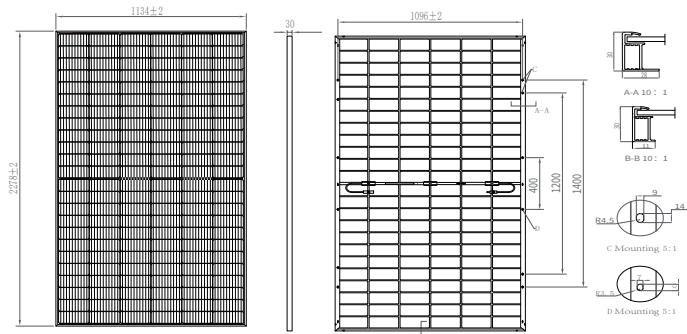
Operating Temperature (°C)	-40°C~+85°C
Maximum System Voltage (V)	1500V DC (IEC)
Maximum Series Fuse Rating (A)	30A
Power Tolerance	0~+5W
Bifaciality	80%±5%
Static load	Snow load 5400Pa, Wind load 2400Pa
Packaging Configuration	36 pcs/pallet, 720 pcs/40 HQ

## Electrical Properties | BNPI\*

	643	648	654	659	665	670
MPP Voltage (Vmp/V)	44.07	44.29	44.49	44.65	44.78	44.91
MPP Current (Imp/A)	14.59	14.63	14.70	14.76	14.85	14.92
Open Circuit Voltage (Voc/V)	52.54	52.74	52.94	53.14	53.34	53.54
Short Circuit Current (Isc/A)	15.28	15.33	15.39	15.47	15.55	15.62

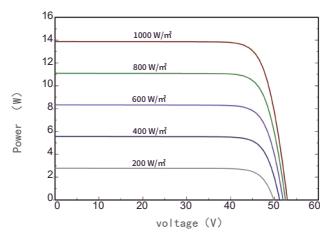
\*BNPI: Irradiance: front 1000W/m<sup>2</sup>, rear 135W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

## Engineering Drawings (unit: mm)

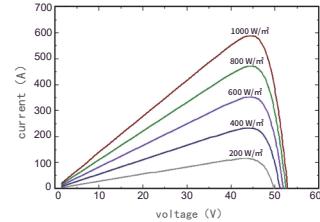


For specific dimensions and tolerance ranges, please refer to the corresponding component drawings.

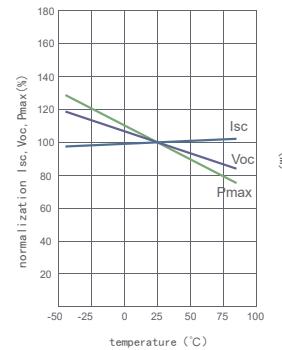
## Characteristic Curves: CHGMN72D1



Current and voltage curves under different irradiations



Power and voltage curves under different irradiations



Temperature Curves of Isc, Voc, Pmax under Different Temperatures