

GCL- NT12/60GDF



615-635W

**Bifacial Dual Glass
Monocrystalline Module**

635W

Maximum Power Output

22.4%

Maximum Module Efficiency

0~+5W

Power Output Guarantee



GCL Delivers Reliable Performance Over Time

- World-class manufacturer of crystalline silicon photovoltaic modules
- Fully automatic facility and world-class technology
- Rigorous quality control to meet the highest standard: ISO 9001, ISO 14001 and ISO 45001
- 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



Ideal choice for large scale ground installation



Non-destructive cutting, reduce potential micro crack risk

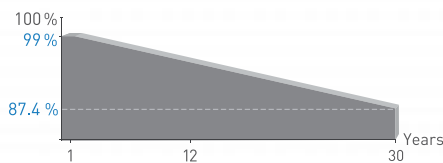


Additional safety, Fire class A certified



N type technology: The N-type module has better reliability and lower LID/LETID

Linear Performance Warranty



12 Year Product Warranty

30 Year Linear Power Warranty

0.40% Annual Degradation Over 30 years



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



Large size silicon wafer module can reduce the cost of PV support bracket, combining manifolds, cable, land and so on, thus thinning the LCOE

* Please refer to GCL standard warranty for details

Additional Insurance Backed by Swiss RE

* Please refer to GCL for details



Electrical Specification (STC*)

Maximum Power	Pmax(W)	615	620	625	630	635
Maximum Power Voltage	Vmp(V)	36.25	36.45	36.66	36.86	37.05
Maximum Power Current	Imp(A)	16.97	17.01	17.05	17.09	17.14
Open Circuit Voltage	Voc(V)	42.50	42.70	42.90	43.10	43.31
Short Circuit Current	Isc(A)	17.69	17.74	17.80	17.85	17.90
Module Efficiency	(%)	21.7	21.9	22.1	22.3	22.4
Power Output Tolerance	(W)			0~+5		

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

Electrical Specification (NMOT*)

Maximum Power	Pmax (W)	464.14	468.11	471.95	475.61	479.62
Maximum Power Voltage	Vmp (V)	33.78	33.97	34.15	34.34	34.53
Maximum Power Current	Imp (A)	13.74	13.78	13.82	13.85	13.89
Open Circuit Voltage	Voc(V)	40.03	40.22	40.41	40.60	40.79
Short Circuit Current	Isc (A)	14.26	14.31	14.35	14.39	14.44

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

Electrical characteristics with different power bin (reference to 10% Irradiance ratio on module rear)

Maximum Power	Pmax (W)	664.10	669.59	674.73	680.25	685.80
Maximum Power Voltage	Vmp (V)	36.25	36.45	36.65	36.85	37.05
Maximum Power Current	Imp (A)	18.32	18.37	18.41	18.46	18.51
Open Circuit Voltage	Voc(V)	42.50	42.70	42.90	43.10	43.31
Short Circuit Current	Isc (A)	19.10	19.16	19.22	19.28	19.34

Irradiance ratio (rear/front) 10%

Mechanical Data

Number of Cells	120 Cells (6×20)
Dimensions of Module L*W*H (mm)	2172×1303×35mm (85.51×51.30×1.38 inches)
Weight (kg)	34.8kg
Front Side Glass	2.0mm (0.08 inches), Anti-Reflection Coating
Back Side Glass	2.0mm (0.08 inches), Heat Strengthened Glass
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm ² , Portrait: +400/-200mm length can be customized
Number of diodes	3
Wind/ Snow Load	2400Pa/ 5400Pa*
Connector	MC Compatible
Bifaciality	80±5%

* For more details please check the installation manual of GCLSI

Temperature Ratings

Nominal Module Operating Temperature(NMOT)	45±2°C
Temperature Coefficient of Isc	+0.045%/°C
Temperature Coefficient of Voc	-0.26%/°C
Temperature Coefficient of Pmax	-0.29%/°C

Maximum Ratings

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Max Series Fuse Rating	35A

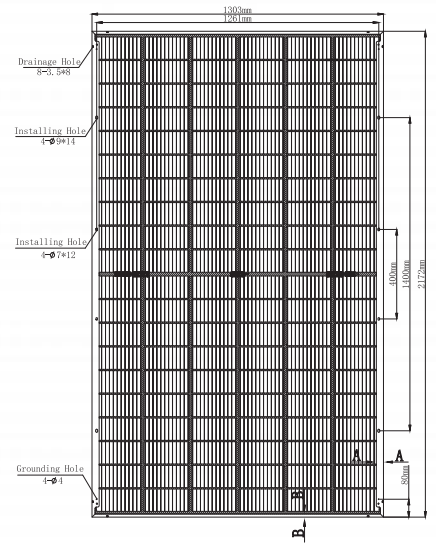
Optional

Connector: Original MC4

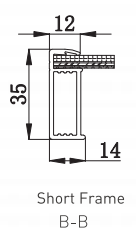
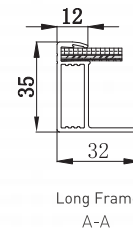
Packaging Configuration

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

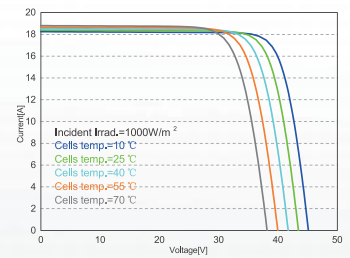
Module Dimension



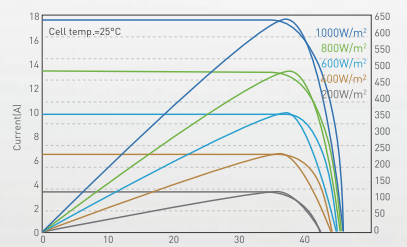
Back View



I-V Curve at Different Temperature (635W)



I/P-V Curve at Different Irradiation (635W)



CAUTION: READ INSTALLATION MANUAL BEFORE USING THE PRODUCT

Contact Us for More Information

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