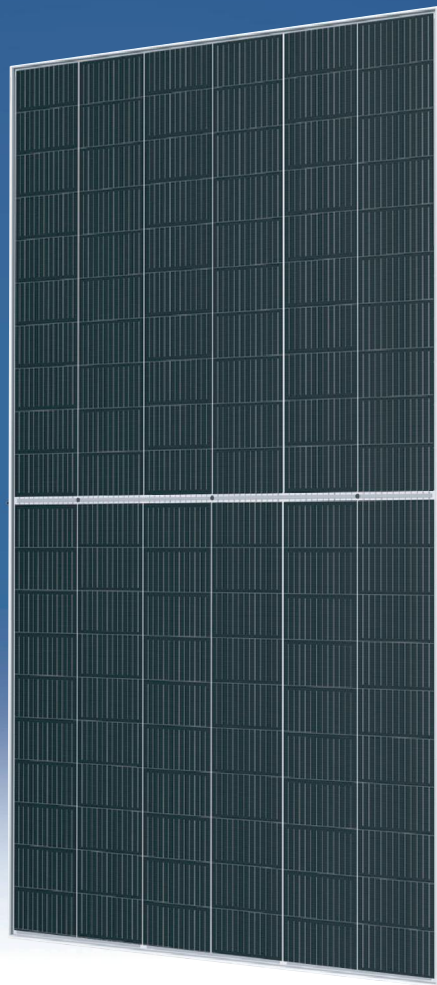




GCL-M12/60GDF

Bifacial Dual Glass Monocrystalline Module

575-610 W



610 W

Maximum Power Output

21.6%

Maximum Module Efficiency

0~+5W

Power Output Guarantee



Ideal choice for large scale ground installation



Non-destructive cutting, reduce potential micro crack risk



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



Additional safety, Fire class Acertified



Withstand up to 1500V system voltage effectively reduce BOS cost

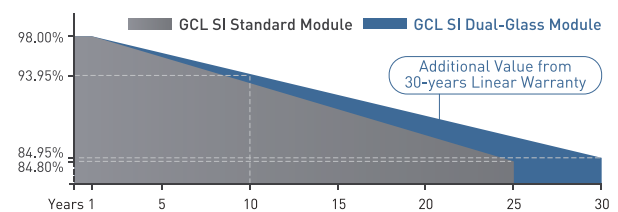


Large size silicon wafer module can reduce the cost of PV support bracket, combining manifolds, cable, land and so on, thus thinning the LCOE

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

Linear Performance Warranty



12 Years Product Warranty 30 Years Linear Power Warranty

* Please refer to GCL standard warranty for details

Additional Insurance Backed by Swiss RE



* Please refer to GCL for details

GCL-M12/60GDF

Bifacial Dual Glass Monocrystalline Module 575-610 W

Electrical Specification (STC*)

Maximum Power	P _{max} (W)	575	580	585	590	595	600	605	610
Maximum Power Voltage	V _{mp} (V)	33.55	33.75	33.95	34.15	34.35	34.55	34.75	34.95
Maximum Power Current	I _{mp} (A)	17.14	17.19	17.23	17.28	17.32	17.37	17.41	17.46
Open Circuit Voltage	V _{oc} (V)	40.64	40.84	41.04	41.24	41.44	41.64	41.84	42.04
Short Circuit Current	I _{sc} (A)	18.20	18.25	18.30	18.36	18.41	18.46	18.52	18.57
Module Efficiency	(%)	20.3	20.5	20.7	20.8	21.0	21.2	21.4	21.6
Power Output Tolerance	(W)	0~+5							

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

Electrical Specification (NMOT*)

Maximum Power	P _{max} (W)	435.0	438.8	442.6	446.4	450.2	454.0	457.7	461.5
Maximum Power Voltage	V _{mp} (V)	31.30	31.48	31.67	31.86	32.05	32.23	32.42	32.60
Maximum Power Current	I _{mp} (A)	13.90	13.94	13.97	14.01	14.05	14.09	14.12	14.16
Open Circuit Voltage	V _{oc} (V)	38.28	38.47	38.66	38.84	39.03	39.22	39.41	39.60
Short Circuit Current	I _{sc} (A)	14.67	14.71	14.76	14.80	14.84	14.88	14.93	14.97

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

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

Maximum Power	P _{max} (W)	615.3	620.6	626.0	631.3	636.7	642.0	647.4	652.7
Maximum Power Voltage	V _{mp} (V)	33.55	33.75	33.95	34.15	34.35	34.55	34.75	34.95
Maximum Power Current	I _{mp} (A)	18.34	18.39	18.44	18.49	18.54	18.58	18.63	18.68
Open Circuit Voltage	V _{oc} (V)	40.64	40.84	41.04	41.24	41.44	41.64	41.84	42.04
Short Circuit Current	I _{sc} (A)	19.47	19.53	19.58	19.64	19.70	19.75	19.81	19.87

Irradiance ratio (rear/front) 10%

Mechanical Data

Number of Cells	120 Cells (6x20)
Dimensions of Module L*W*H (mm)	2172x1303x35mm [85.51x51.30x1.38 inches]
Weight (kg)	34.8 kg
Front Side Glass	High transparency solar glass 2.0mm [0.08 inches]
Back Side Glass	High transparency solar glass 2.0mm [0.08 inches]
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm ² (0.006 inches ²), Portrait: 280/280mm (11.02inches)
Number of diodes	3
Wind/ Snow Load	2400Pa/ 5400Pa*
Connector	MC Compatible
Bifaciality	70±5%

* For more details please check the installation manual of GCLSI

Temperature Ratings

Nominal Module Operating Temperature(NMOT)	42±2°C
Temperature Coefficient of I _{sc}	+0.05%/°C
Temperature Coefficient of V _{oc}	-0.28%/°C
Temperature Coefficient of P _{MAX}	-0.35%/°C

Maximum Ratings

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

Optional

Connector: Original MC4

Packaging Configuration

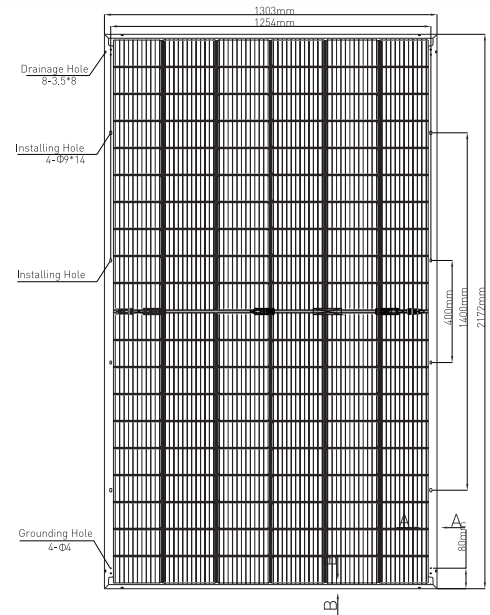
Module per box	31 pieces
Module per 40' container	527 pieces



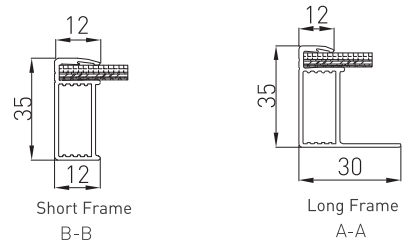
Contact Us for More Information

website: www.gclsi.com email: gclsisales@gclsi.com

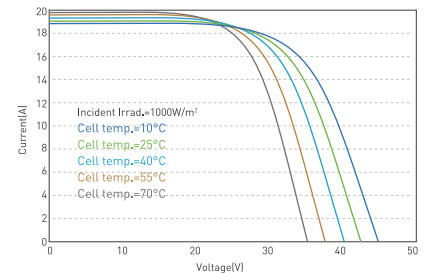
Module Dimension



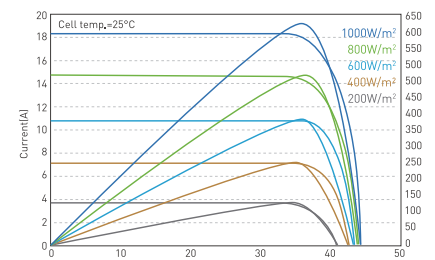
Back View



I-V Curve at Different Temperature (610W)



I-P/P-V Curve at Different Irradiation (610W)



CAUTION: READ INSTALLATION MANUAL BEFORE USING THE PRODUCT