



GCL-M8/72DH

Transparent Backsheet Bifacial Monocrystalline Module

415-445W



445W

Maximum Power Output

19.9%

Maximum Module Efficiency

0~+5W

Power Output Guarantee



Use the Tedlar® PVF film produced by DUPONT



More evenly distributed soldering points and better reliability and lower hot spot risk



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



Higher lifetime power yield:
0.6% annual power degradation
30 years power warranty



Withstand up to 1500V system voltage effectively reduce BOS cost

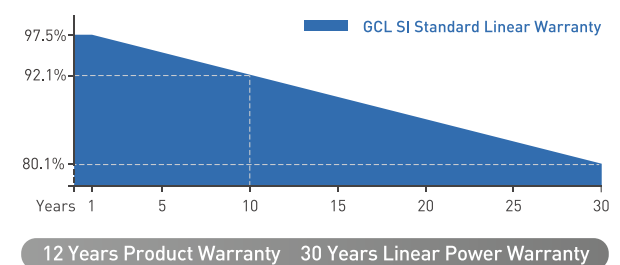


Sand blowing test, salt mist test and ammonia test passed to endure harsh environments

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



* Please refer to GCL standard warranty for details



* Please refer to GCL for details

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415-445W

Electrical Specification (STC*)

Test Condition		Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear
Maximum Power	P _{max} (W)	415	291	420	294	425	298	430	301	435	305	440	308
Maximum Power Voltage	V _{mp} (V)	39.49	39.89	39.78	40.18	40.10	40.50	40.38	40.78	40.70	41.10	41.01	41.41
Maximum Power Current	I _{mp} (A)	10.51	7.28	10.56	7.32	10.60	7.35	10.65	7.38	10.69	7.41	10.73	7.44
Open Circuit Voltage	V _{oc} (V)	46.93	46.23	47.22	46.52	47.54	46.84	47.82	47.12	48.14	47.44	48.45	47.75
Short Circuit Current	I _{sc} (A)	11.00	7.72	11.05	7.76	11.09	7.79	11.14	7.82	11.18	7.85	11.22	7.88
Module Efficiency	(%)	18.6	13.0	18.8	13.2	19.0	13.3	19.3	13.5	19.5	13.6	19.7	13.8
Power Output Tolerance	(W)	0~+5											

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

Electrical Specification (NOCT*)

Test Condition		Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear	Front	Rear
Maximum Power	P _{max} (W)	309.96	216.16	313.60	218.67	317.25	221.19	320.92	223.72	324.61	226.26	328.32	228.82
Maximum Power Voltage	V _{mp} (V)	36.90	36.70	37.20	37.00	37.50	37.30	37.80	37.60	38.10	37.90	38.40	38.20
Maximum Power Current	I _{mp} (A)	8.40	5.89	8.43	5.91	8.46	5.93	8.49	5.95	8.52	5.97	8.55	5.99
Open Circuit Voltage	V _{oc} (V)	43.80	43.10	44.10	43.40	44.40	43.70	44.70	44.00	45.00	44.30	45.30	44.60
Short Circuit Current	I _{sc} (A)	8.89	6.24	8.92	6.27	8.95	6.30	8.98	6.33	9.01	6.36	9.04	6.39

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

Mechanical Data

Number of Cells	144 Cells (6x24)
Dimensions of Module L*W*H (mm)	2130x1048x35mm [83.86x41.26x1.38 inches]
Weight (kg)	25.9 kg
Glass	High transparency solar glass 3.2mm (0.13 inches)
Backsheet	Use Tedlar® PVF film produced by DUPONT
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm ² [0.006 inches ²], Portrait: 200/200mm [7.87inches]
Number of diodes	3
Wind/Snow Load	2400Pa/ 5400Pa*
Connector	MC Compatible

* For more details please check the installation manual of GCLSI

Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	44±2°C
Temperature Coefficient of I _{sc}	+0.06%/°C
Temperature Coefficient of V _{oc}	-0.30%/°C
Temperature Coefficient of P _{MAX}	-0.39%/°C

Maximum Ratings

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Max Series Fuse Rating	20A

Optional

Connector: Original MC4

Packaging Configuration

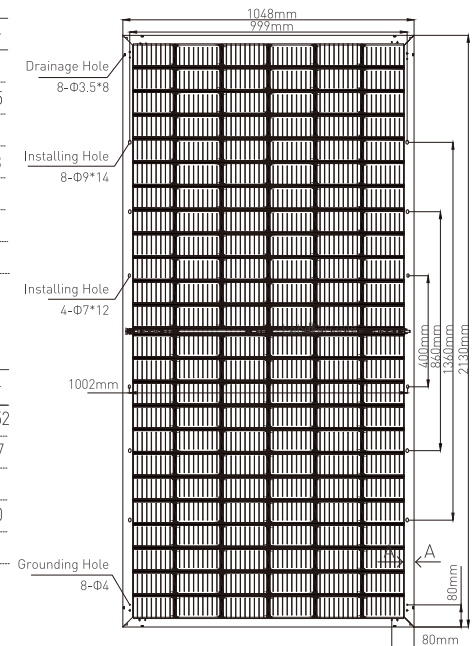
Module per box	30 pieces
Module per 40' container	600 pieces



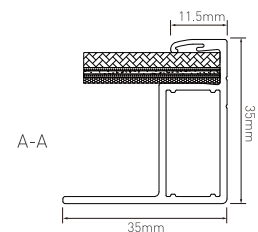
Contact Us for More Information

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

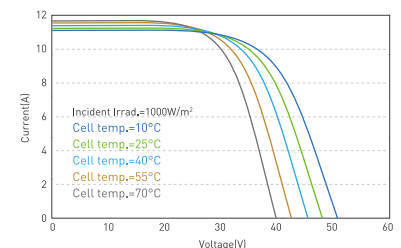
Module Dimension



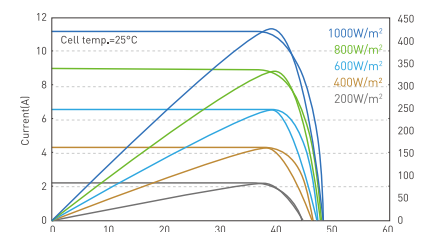
Back View



I-V Curve at Different Temperature (440W)



I-V/P-V Curve at Different Irradiation (440W)



CAUTION: READ INSTALLATION MANUAL BEFORE USING THE PRODUCT