

GCL- NT10R/54GDF

435-455W

**Bifacial Dual Glass
Monocrystalline Module**



455W

Maximum Power Output

22.3%

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



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



Ideal choice for residential rooftop

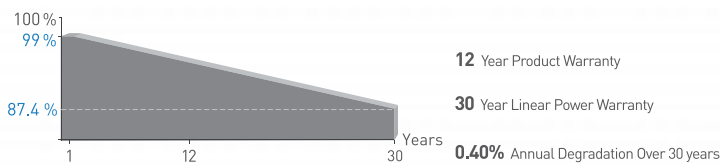


N type technology: The N-type module has better reliability and lower LID/LETID



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

Linear Performance Warranty



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

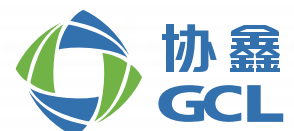


Special cutting and soldering technology leads to low hotspot risk

* 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]	435	440	445	450	455
Maximum Power Voltage	Vmp[V]	31.82	32.03	32.23	32.42	32.60
Maximum Power Current	Imp[A]	13.67	13.74	13.81	13.88	13.96
Open Circuit Voltage	Voc[V]	38.30	38.46	38.62	38.78	38.94
Short Circuit Current	Isc[A]	14.39	14.46	14.53	14.59	14.66
Module Efficiency	(%)	21.3	21.6	21.8	22.0	22.3
Power Output Tolerance	[W]			0~+5		

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

Electrical Specification (NMOT*)

Maximum Power	Pmax [W]	329.5	333.1	336.7	340.3	343.9
Maximum Power Voltage	Vmp [V]	29.93	30.09	30.25	30.41	30.57
Maximum Power Current	Imp [A]	11.01	11.07	11.13	11.19	11.25
Open Circuit Voltage	Voc[V]	36.10	36.25	36.40	36.55	36.70
Short Circuit Current	Isc [A]	11.61	11.67	11.73	11.79	11.85

* 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]	469.7	475.3	480.5	486.0	491.6
Maximum Power Voltage	Vmp [V]	31.82	32.03	32.23	32.42	32.60
Maximum Power Current	Imp [A]	14.76	14.84	14.91	14.99	15.08
Open Circuit Voltage	Voc[V]	38.30	38.46	38.62	38.78	38.94
Short Circuit Current	Isc [A]	15.54	15.62	15.69	15.76	15.83
Irradiance ratio (rear/front)		10%				

Mechanical Data

Number of Cells	108 Cells (6x18)
Dimensions of Module L*W*H (mm)	1762x1134x30mm (69.37x44.65x1.18 inches)
Weight (kg)	20.5kg
Front Side Glass	1.6mm (0.06 inches), High transparency solar glass
Back Side Glass	1.6mm (0.06 inches), Heat strengthened glass
Frame	Black/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	-0.25%/°C
Temperature Coefficient of P _{MAX}	-0.29%/°C

Maximum Ratings

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

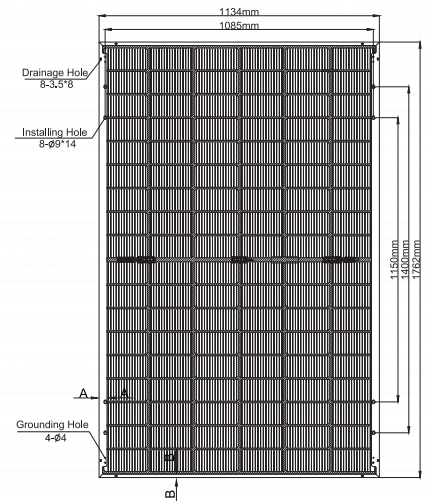
Optional

Connector: Original MC4

Packaging Configuration

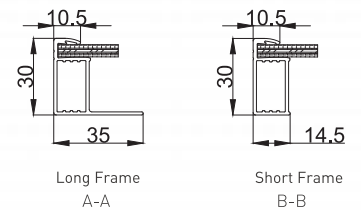
Module per box	36 pieces
Module per 40' container	864 pieces

Module Dimension

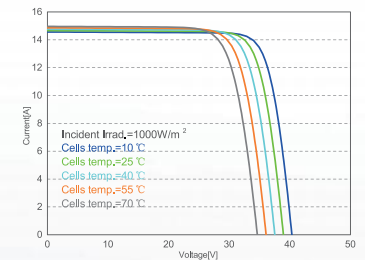


Tolerance:
Length:±2mm
Width:±2mm

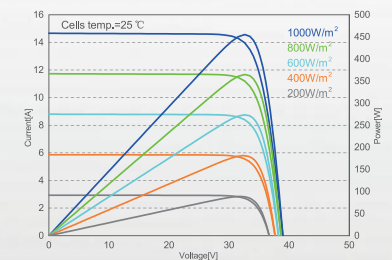
Back View



I-V Curve at Different Temperature (455W)



I-V/P-V Curve at Different Irradiation (455W)



CAUTION: READ INSTALLATION MANUAL BEFORE USING THE PRODUCT

Contact Us for More Information

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