

GCL- NT10R/54GDF

440-455W

**Bifacial Dual Glass
Monocrystalline Module**



455W

Maximum Power Output

22.8%

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
- Long term reliability tests
- 2x100%ELinspection ensuring defect-free modules

Comprehensive System and Product Certifications

- ISO14001:2015 Environmental management systems
- ISO9001:2015 Quality management systems
- ISO14001:2015 Environmental management systems
- ISO45001:2018 Occupational health and safety management systems
- IEC62941:2019 Terrestrial photovoltaic PV modules
- Quality system for PV modules



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



Ideal choice for residential rooftop

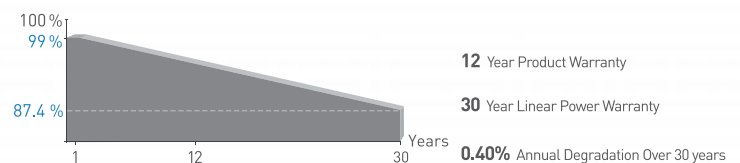


N type technology: The N-type module has better reliability and lower LID/LETID



Special cutting and soldering technology leads to low hotspot risk

Linear Performance Warranty



* Please refer to GCL standard warranty for details

Additional Insurance Backed by Swiss RE

* Please refer to GCL for details



Electrical Specification (STC & BNPI) | GCL-NT10R54GDF xxx(xxx=440-455)

Testing Conditions		STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI
Maximum Power	Pmax[W]	440	485	445	490	450	495	455	500
Maximum Power Voltage	Vmp[V]	32.96	/	33.21	/	33.46	/	33.71	/
Maximum Power Current	Imp[A]	13.35	/	13.40	/	13.45	/	13.50	/
Open Circuit Voltage	Voc[V]	39.50	39.60	39.75	39.85	40.00	40.10	40.25	40.35
Short Circuit Current	Isc[A]	13.85	15.15	13.90	15.20	13.95	15.23	14.00	15.30
Module Efficiency	(%)	22.0		22.3		22.5		22.8	

*STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass 1.5 *BNPI: Irradiance of front 1000W/m², rear 135W/m²

*Measurement uncertainty: ±3%(Pmax); Voc Tolerance: ±3%; Isc Tolerance: ±4%

Electrical Specification (NOCT*)

Maximum Power	Pmax [W]	331.7	335.2	338.7	342.2
Maximum Power Voltage	Vmp [V]	31.23	31.44	31.65	31.86
Maximum Power Current	Imp [A]	10.62	10.66	10.70	10.74
Open Circuit Voltage	Voc[V]	37.22	37.46	37.70	37.94
Short Circuit Current	Isc [A]	11.18	11.22	11.26	11.30

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

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

Maximum Power	Pmax [W]	475.3	480.5	486.2	491.5
Maximum Power Voltage	Vmp [V]	32.96	33.21	33.46	33.71
Maximum Power Current	Imp [A]	14.42	14.47	14.53	14.58
Open Circuit Voltage	Voc[V]	39.50	39.75	40.00	40.25
Short Circuit Current	Isc [A]	14.96	15.01	15.07	15.12

Mechanical Data

Number of Cells	108 Cells (6×18)
Dimensions of Module L*W*H (mm)	1762×1134×30mm (69.37×44.65×1.18 inches)
Weight (kg)	21.5kg
Front Side Glass	1.6mm (0.06 inches), High transparency solar glass
Back Side Glass	1.6mm (0.06 inches), Heat strengthened glass
Frame	Anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm ² , Portrait: +300/-200mm length can be customized
Fire rating	IEC Class C
Wind/ Snow Load	2400Pa/ 5400Pa*
Protection Class	ClassII
Bifaciality	Pmax=80%, Voc=95%, Isc=80% (±5%)

* For more details please check the installation manual of GCLSI

Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	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

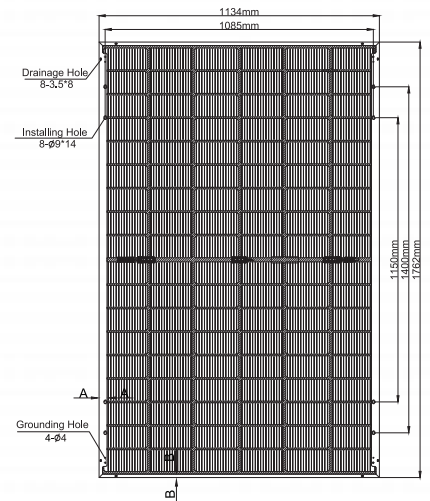
Maximum Ratings

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

Packaging Configuration

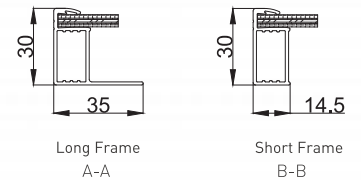
Module per box	36 pieces
Module per 40' container	936 pieces

Module Dimension

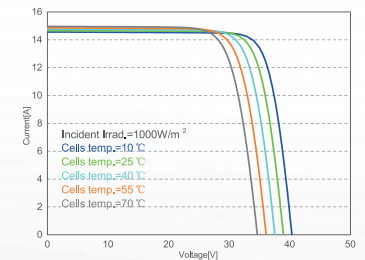


Tolerance:
Length: ±2mm
Width: ±2mm

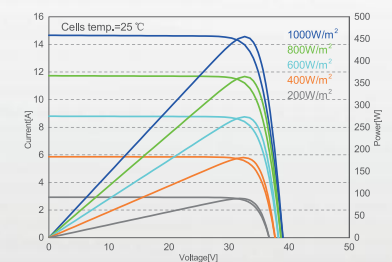
Back View



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

GCL System Integration Technology Co.,Ltd.
address: Jianghai Economic Zone, Nanqiao Town Fengxian District, 201406 Shanghai P.R.China
website: www.gclsi.com email: gclsisales@gclsi.com





Optional/Connector

Serial	Kind of component	Manufacturer	Specification
1	Connector	Suzhou Bright Photovoltaic Electronic Technology Co.,Ltd.	B01
2		Jiangsu Haitian Microelectronics Corp.	PV-HT03x (x=0 or 1 or 2)
3		Hefei GCL System Integration New Energy Technology Co., Ltd.	GCL-01
4			GCL-02
5		Suzhou Xtong Photovoltaic Technologies Co., Ltd.	PV-XT101.1
6			PV-XT101.2
7			XT2
8		Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR (male)
9			PV-KBT4-EVO 2/xy_UR (female)
10			PV-KST4-EVO2A/xy (male)
11			PV-KBT4-EVO2A/xy (female)

Contact Us for More Information

GCL System Integration Technology Co.,Ltd.

Jianghai Economic Zone, Nanqiao Town Fengxian District,201406 ShanghaiP.R.China

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

Made In China



Bringing Green Power To Life