

SiRo Full Black



GCL-NT12R/54BGDF

500-525W

N-type Bifacial Double Glass Module

TOPCon 2.0 Tech



Designed with TOPCon 2.0 technology for
higher power output and long-term reliability



Sound quality management and
product certification system

The product has obtained:

IEC61215 / IEC61730

Manufacturer has been certified:

ISO 9001:2015: Quality management systems

ISO 14001:2015: Environmental management systems

ISO 45001:2018: Occupational health and safety management systems



Low degradation ensures
reliable output over the
module's lifetime

High bifaciality for superior
rear-side power output

Excellent temperature coefficient
ensures power generation in high
temperature areas

Enhanced low-light response
ensures stable output under
low-light conditions

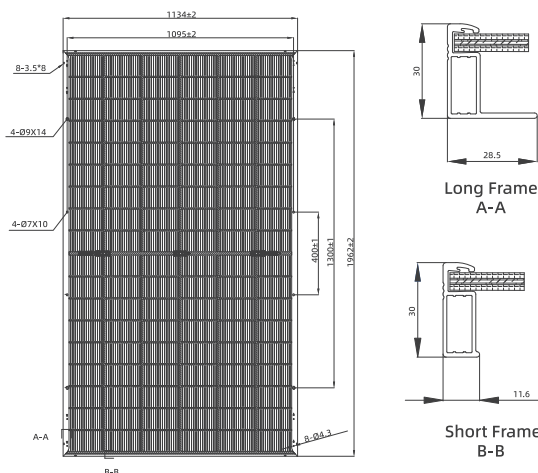


Mechanical Data

Cell Type	N-Type Monocrystalline Solar Cell
Number of Cells	108 Cells (6×18)
Dimensions of Module	1962×1134×30mm (77.24×44.65×1.18 inches)
Weight	27.3kg
Front Side Glass	2.0mm (0.08 inches), Anti-Reflection Coating
Back Side Glass	2.0mm (0.08 inches), Heat Strengthened Glass
Frame	Black, anodized aluminium alloy
J-Box	IP68 Rated, 3 diodes
Cable	4.0mm ² , +300/-200mm (length can be customized)
Connector	GCL-01/GCL-02/Others
Packaging Configuration	Module per box: 36 pieces Module per 40' HQ: 864 pieces

Module Dimension

Tolerance: Length:±2mm Width:±2mm



Electrical Specification (STC*)

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

Maximum Power	P _{max} (W)	500	505	510	515	520	525
Maximum Power Voltage	V _{mp} (V)	33.92	34.22	34.49	34.75	35.02	35.28
Maximum Power Current	I _{mp} (A)	14.74	14.76	14.79	14.82	14.85	14.88
Open Circuit Voltage	V _{oc} (V)	40.32	40.61	40.90	41.19	41.48	41.77
Short Circuit Current	I _{sc} (A)	15.42	15.44	15.47	15.50	15.53	15.56
Module Efficiency	(%)	22.47	22.70	22.92	23.15	23.37	23.60
Power Output Guarantee	(%)	0~+3					
Temperature Coefficient of I _{sc}	(I _{sc})	+0.045%/°C					
Temperature Coefficient of V _{oc}	(V _{oc})	-0.25%/°C					
Temperature Coefficient of P _{max}	(P _{max})	-0.29%/°C					

Electrical Characteristics with Different Power Bin (Reference to 10% Irradiance Ratio)

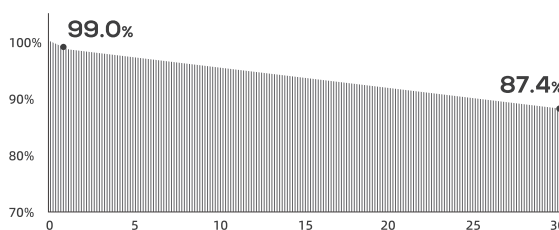
Maximum Power	P _{max} (W)	540.0	545.5	550.8	556.3	561.7	566.9
Maximum Power Voltage	V _{mp} (V)	33.92	34.22	34.49	34.75	35.02	35.28
Maximum Power Current	I _{mp} (A)	15.92	15.94	15.97	16.01	16.04	16.07
Open Circuit Voltage	V _{oc} (V)	40.32	40.61	40.90	41.19	41.48	41.77
Short Circuit Current	I _{sc} (A)	16.65	16.68	16.71	16.74	16.77	16.80

Application Conditions

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Max Series Fuse Rating	35A
Wind/ Snow Load	2400Pa/5400Pa*
Bifaciality	80±5%

*For more details please check the installation manual of GCLSI

Linear Performance Warranty

12 year
Product warranty30 year
Linear power warranty1%
First year power attenuation0.40%
Annual degradation over
30 years