

SiRo T Efficient



GCL-NT12R/66GDF

630-650W

N-type Bifacial Double Glass Module

TOPCon^{2.0}
Tech

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

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

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

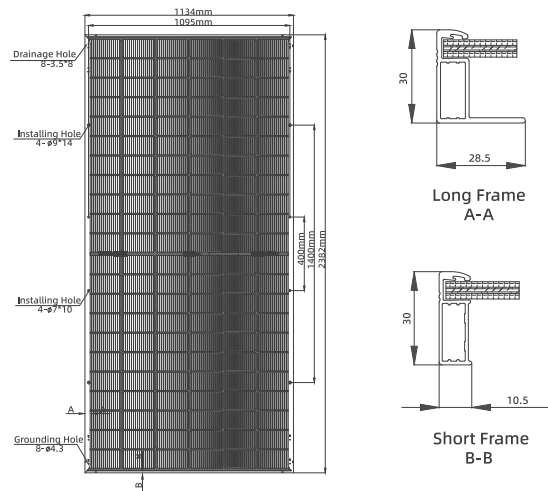


Mechanical Data		Module Dimension	
		Tolerance: Length:±2mm Width:±2mm	
Cell Type	N-Type Monocrystalline Solar Cell		
Number of Cells	132 Cells (6×22)		
Dimensions of Module	2382×1134×30mm (93.78×44.65×1.18 inches)		
Weight	32.5 kg		
Front Side Glass	2.0mm (0.08 inches), Anti-Reflection Coating		
Back Side Glass	2.0mm (0.08 inches), Heat strengthened glass		
Frame	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: 720 pieces		

The technical drawing illustrates the physical specifications of the solar module. The front view shows a rectangular panel with a grid of cells. Key dimensions include a total length of 1134mm (1095mm for the cell area) and a total width of 2382mm (1400mm for the cell area). It also indicates the positions of a drainage hole (8-3.5"8), two installing holes (4-ø9"14), and a grounding hole (8-ø4.3). The side view shows a profile with a height of 30mm and a width of 28.5mm for the long frame and 10.5mm for the short frame.

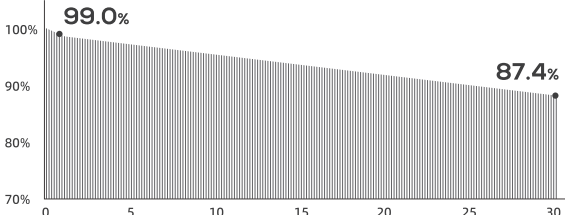
Long Frame A-A

Short Frame B-B



Electrical Specification (STC*) * Irradiance 1000W/m ² , Cell Temperature 25°C, Air Mass 1.5						
Maximum Power	Pmax (W)	630	635	640	645	650
Maximum Power Voltage	Vmp(V)	41.31	41.50	41.72	41.94	42.15
Maximum Power Current	Imp (A)	15.25	15.30	15.34	15.38	15.42
Open Circuit Voltage	Voc (V)	48.70	48.88	49.15	49.40	49.65
Short Circuit Current	Isc (A)	16.05	16.13	16.17	16.21	16.25
Module Efficiency	(%)	23.32	23.51	23.69	23.88	24.06
Power Output Guarantee	(%)	0~+3				
Temperature Coefficient of Isc	(Isc)	+0.045%/°C				
Temperature Coefficient of Voc	(Voc)	-0.25%/°C				
Temperature Coefficient of Pmax	(Pmax)	-0.29%/°C				

Electrical Characteristics with Different Power Bin (Reference to 10% Irradiance Ratio)						
Maximum Power	Pmax (W)	680.4	685.6	691.3	696.6	701.8
Maximum Power Voltage	Vmp(V)	41.31	41.50	41.72	41.94	42.15
Maximum Power Current	Imp (A)	16.47	16.52	16.57	16.61	16.65
Open Circuit Voltage	Voc (V)	48.70	48.88	49.15	49.40	49.65
Short Circuit Current	Isc (A)	17.33	17.42	17.46	17.51	17.55

Application Conditions		Linear Performance Warranty	
Operational Temperature	-40~+85℃	 99.0% 87.4%	12 year Product warranty
Maximum System Voltage	1500V DC		30 year Linear power warranty
Max Series Fuse Rating	35A		1% First year power attenuation
Wind/ Snow Load	2400Pa/5400Pa*		0.40% Annual degradation over 30 years
Bifaciality	80±5%		
*For more details please check the installation manual of GCLSI			