








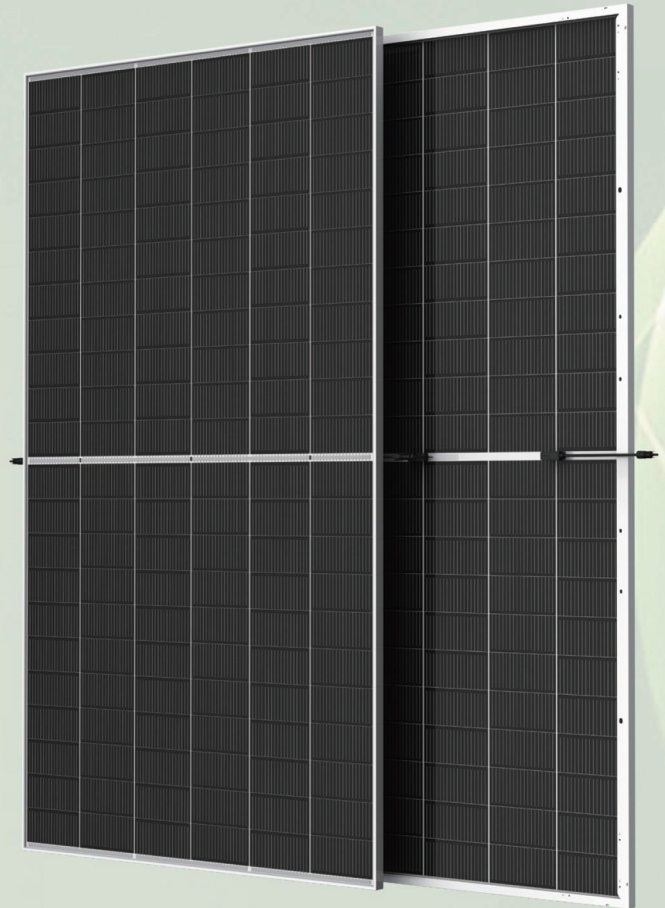




■ N-Type Solar Module

KEY FEATURES

-  Excellent performance in low-light environments
-  High quality junction box and connector systems
-  100% inspection, to guarantee the reliability of solar systems
-  Lower temperature
-  Anti PID
-  Enhanced safety by excellent fire resistance
-  Perfect for sandy, snowy and high latitude regions
-  Lower operating temperature, more reliable
-  Cutcell, Less internal power loss, Less mismatch loss

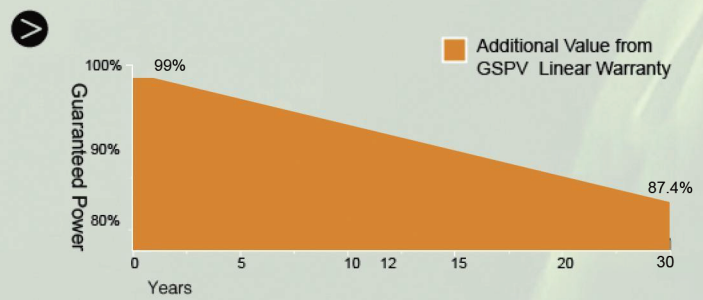


GSPV-M12/132H-675W-700W 675~700 Watt

- 210mm 132 Cells Bifacial Double Glass Topcon Mono Half Cell PV-Module Series

BLACK *BLACK FRAME/BLACK BACK-SHEET PRODUCTS ARE AVAILABLE UPON REQUEST

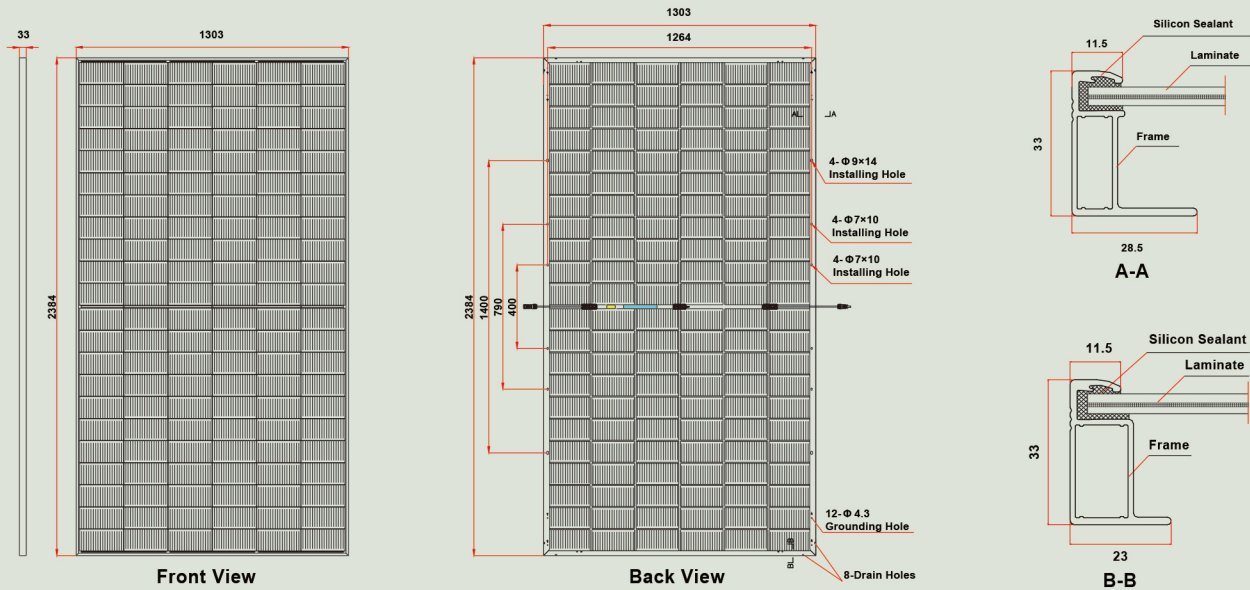
- **12** years Product Warranty
- 30** years Linear Power Warranty
- 0.40%** Annual Degradation over 30 years
- 



IEC61215
IEC61730
UL61215
UL61730



DIMENSIONS OF PV MODULE(mm)



MECHANICAL DATA

Solar Cells	N-type Monocrystalline
No. of cells	132 cells
Module Dimensions	2384×1303×33 mm (93.86×51.30×1.30 inches)
Weight	38.3kg (84.4 lb)
Front Glass	2.0 mm (0.08 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	POE/EVA
Back Glass	2.0 mm (0.08 inches), Heat Strengthened Glass (White Grid Glass)

Frame	33mm(1.30 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²) Portrait: 350/280 mm(13.78/11.02 inches) Length can be customized
Connector	MC4 EVO2 / TS4 PLUS / TS4*

*Please refer to regional datasheet for specified connector.

ELECTRICAL DATA (STC & NOCT)

Testing Condition	STC		NOCT		STC		NOCT		STC		NOCT		STC		NOCT	
Peak Power Watts-P _{MAX} (Wp)*	675	514	680	517	685	521	690	526	695	530	700	534				
Power Tolerance-P _{MAX} (W)	0 ~ +5															
Maximum Power Voltage-V _{MPP} (V)	39.4	37.0	39.6	37.2	39.8	37.3	40.1	37.7	40.3	37.8	40.5	38.0				
Maximum Power Current-I _{MPP} (A)	17.12	13.89	17.16	13.91	17.19	13.94	17.23	13.96	17.25	14.02	17.29	14.05				
Open Circuit Voltage-V _{OC} (V)	47.2	44.7	47.4	44.9	47.7	45.2	47.9	45.4	48.3	45.8	48.6	46.0				
Short Circuit Current-I _{SC} (A)	18.14	14.62	18.18	14.65	18.21	14.67	18.25	14.71	18.28	14.73	18.32	14.76				
Module Efficiency η _m (%)	21.7		21.9		22.1		22.2		22.4		22.5					

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5, NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s. *Measuring tolerance: ±3%

Electrical characteristics with different power bin(reference to 5%&10% backside power gain)

Backside Power Gain	5%		10%		5%		10%		5%		10%		5%		10%	
Total Equivalent power -P _{MAX} (Wp)	709	743	714	748	719	754	725	759	730	765	735	770				
Maximum Power Voltage-V _{MPP} (V)	39.4	39.4	39.6	39.6	39.8	39.8	40.1	40.1	40.3	40.3	40.5	40.5				
Maximum Power Current-I _{MPP} (A)	17.98	18.83	18.02	18.88	18.05	18.91	18.09	18.95	18.11	18.98	18.15	19.02				
Open Circuit Voltage-V _{OC} (V)	47.2	47.2	47.4	47.4	47.7	47.7	47.9	47.9	48.3	48.3	48.6	48.6				
Short Circuit Current-I _{SC} (A)	19.05	19.95	19.09	20.00	19.12	20.03	19.16	20.08	19.19	20.11	19.24	20.15				

Power Backside: 90±5%

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of P _{MAX}	-0.30%/°C
Temperature Coefficient of V _{OC}	-0.24%/°C
Temperature Coefficient of I _{SC}	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
	1500V DC (UL)
Max Series Fuse Rating	35A

WARRANTY

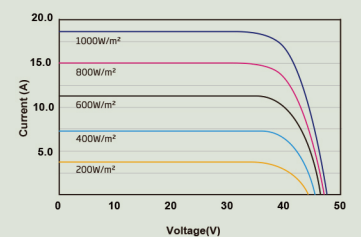
12 year Product Workmanship Warranty
30 year Power Warranty
1% first year degradation
0.40% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING

Modules per box: 33 pieces
Modules per 40' container: 594 pieces

I-V CURVES OF PV MODULE (690W)



P-V CURVES OF PV MODULE (690W)

