

SF-M21/132

665-680W

210*105mm cells 66

Bifacial single glass

PERC half-cell module

Max Power out:680W

Max Efficiency:21.89%

Power tolerance:0~+5W



SMBB Technology

Better light trapping and current collection to improve module power output and reliability



PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.



Reduced Hot Spot Loss

Optimized electrical design and lower operating current for reduced hot spot loss and better temperature coefficient.



Enhanced Mechanical Load

Certified to withstand:wind load (2400 Pascal) and snow load (5400 Pascal).

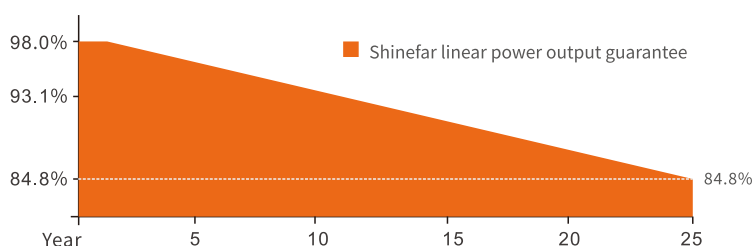


High energy generation, low LCOE

Low Pmax temp coefficient (-0.36%) increases energy production

Superior Warranty

- 15-year material&technology warranty
- 25-year linear power output warranty

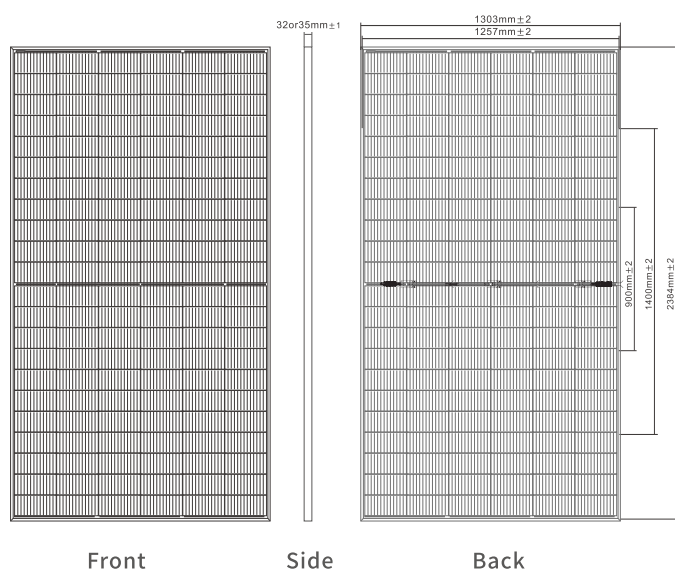


Comprehensive Products and System Certificates

- IEC 61215, IEC 61730, IEC 61701, IEC 62716
- ISO 9001:2015 Quality management systems
- ISO 14001:2015 Environmental management systems
- ISO 45001:2018 Occupational health and safety management systems



Engineering Drawings



Structural parameter

Dimensions of Module	2384x1303x32 or 2384x1303x35mm
Weight	33.5kg
packing	34/31/pallet,612/558/40hq
Front Glass	High Transparency Solar Glass 3.2mm
Back Glass	Transparent or Transparent Grid
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm ² , 300mm
Bypass Diodes	3pcs
Wind/ Snow Load	2400Pa/5400Pa
Connector	MC4 Compatible

Electrical Specification

(STC: Irradiance 1000W/m², cell temperature 25°C, AM1.5G — NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind speed 1m/s)

Module Type	SF-M21/132665		SF-M21/132670		SF-M21/132675		SF-M21/132680	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax) [W]	665	503	670	507	675	511	680	515
Maximum Power Voltage (Vmp) [V]	38.00	35.45	38.20	35.64	38.40	35.83	38.60	36.01
Maximum Power Current (Imp) [A]	17.50	14.20	17.54	14.23	17.58	14.26	17.62	14.29
Open Circuit Voltage (Voc) [V]	45.90	43.24	46.10	43.43	46.30	43.61	46.50	43.80
Short Circuit Current (Isc) [A]	18.56	14.91	18.59	14.94	18.63	14.97	18.66	15.00
Module Efficiency[%]	21.41		21.57		21.73		21.89	
Cell Type[mm]	Mono 210x105,132cells							
Operational Temperature[°C]	-40~+85°C							
Maximum System Voltage	1500V DC							
Max Series Fuse Rating	30A							

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

Total Equivalent power(Pmax)[Wp]	712	717	722	728
Maximum Power Voltage (Vmp) [V]	38.00	38.20	38.40	38.60
Maximum Power Current (Imp) [A]	18.73	18.77	18.81	18.85
Open Circuit Voltage (Voc) [V]	45.90	46.10	46.30	46.50
Short Circuit Current (Isc) [A]	19.85	19.89	19.93	19.97
Irradiance ratio(rear/front)	10%			

Temperature Ratings

Nominal Operating Cell Temperature	45±2°C
Temperature Coefficient of Isc	+0.06%/°C
Temperature Coefficient of Voc	-0.30%/°C
Temperature Coefficient of Pmax	-0.39%/°C

Curve diagram

