

# SF-M16/G132

## 405-420W

### 166×83mm cells 66

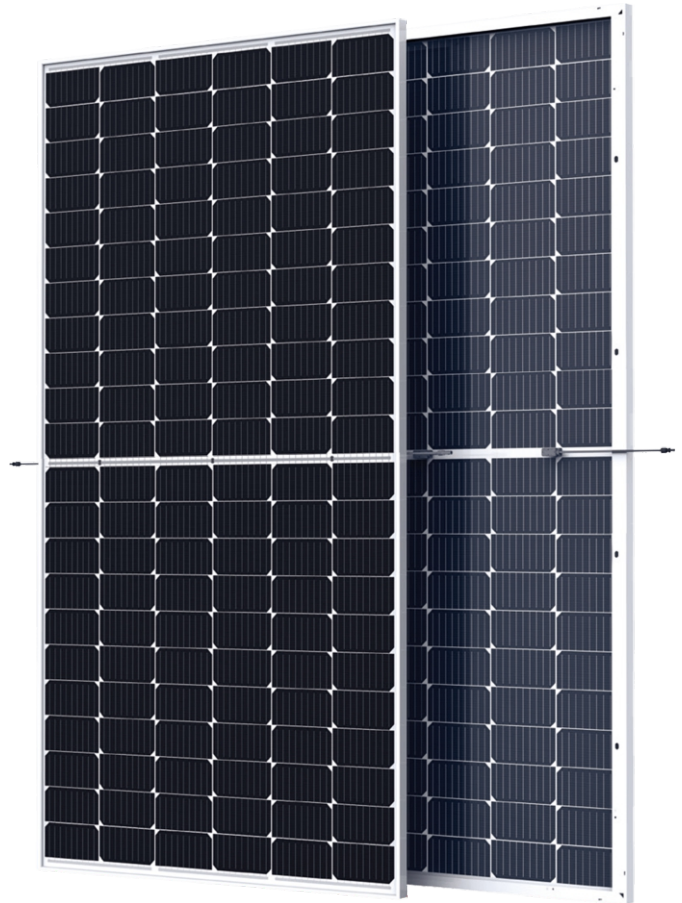
#### Bifacial Double Glass

#### PERC Half-Cell Module

Max Power out: 420W

Max Efficiency: 21.02%

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).

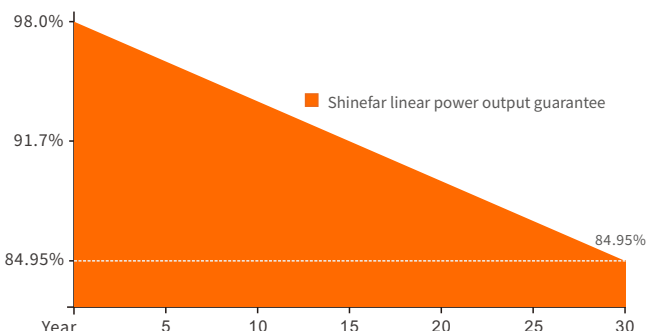


#### High energy generation, low LCOE

Low Pmax temp coefficient increases energy production

### Superior Warranty

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

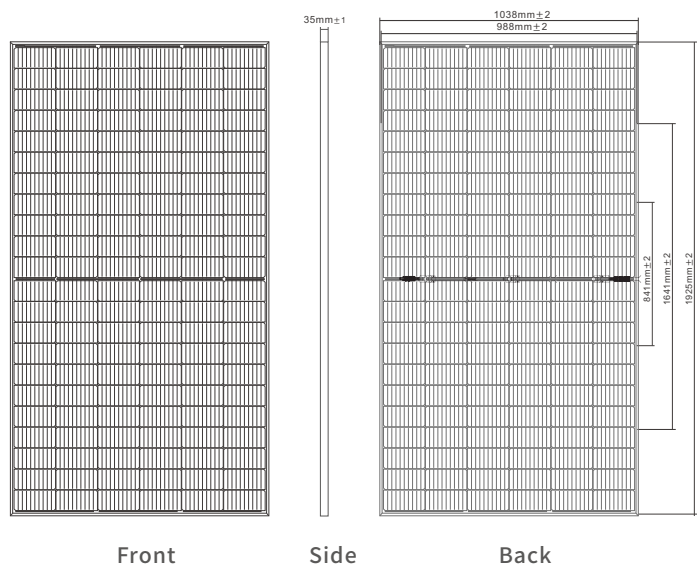


### Comprehensive Products and System Certificates

- IEC/EN61215-1:2021 & IEC/EN61215-2:2021
- IEC/EN61730-1:2016 & IEC/EN61730-2:2016
- UL61730-1:2017 & UL61730-2:2017
- UL61215-1:2017 & UL61215-2:2017
- IEC 61701:2020-Saltmist
- IEC 62716:2013-Ammonia
- IEC 62804:2020-PID
- IECCE CertificateBody (CB)
- UKCA:EN61730-2018
- ISO9001 & ISO14001 & ISO45001



## Engineering Drawings



## Structural Parameter

Dimensions of Module	1925 × 1038 × 35mm
Weight	26kg
Packing	31/pallet, 816/40hq
Front Glass	High Transparency Solar Glass 2.0mm
Back Glass	Heat Strengthened Glass 2.0mm
Frame	Anodized aluminum alloy & Custom color accepted
J-Box	IP68 Rated
Cable	4.0mm <sup>2</sup> , 300mm
Bypass Diodes	3pcs
Wind/ Snow Load	2400Pa/5400Pa
Connector	MC4 Compatible

## Electrical Specification

(STC: Irradiance 1000W/m<sup>2</sup>, cell temperature 25°C, AM1.5G — NOCT: Irradiance 800W/m<sup>2</sup>, Ambient temperature 20°C, Wind speed 1m/s)

Module Type	SF-M16/G132405		SF-M16/G132410		SF-M16/G132415		SF-M16/G132420	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax) [W]	405	300.51	410	304.22	415	307.93	420	311.64
Maximum Power Voltage (Vmp) [V]	37.71	35.38	37.94	35.61	38.17	35.85	38.4	36.08
Maximum Power Current (Imp) [A]	10.74	8.49	10.81	8.54	10.87	8.59	10.94	8.64
Open Circuit Voltage (Voc) [V]	45.49	42.68	45.69	42.92	45.89	43.16	46.09	43.40
Short Circuit Current (Isc) [A]	11.25	8.90	11.32	8.94	11.38	8.98	11.44	9.02
Module Efficiency [%]	20.27		20.52		20.77		21.02	
Cell Type [mm]	Mono 166 × 83, 132 cells							
Operational Temperature [°C]	-40~+85°C							
Maximum System Voltage	1500V DC							
Max Series Fuse Rating	20A							

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

Total Equivalent power (Pmax) [Wp]	446	451	457	462
Maximum Power Voltage (Vmp) [V]	37.71	37.94	38.17	38.4
Maximum Power Current (Imp) [A]	11.81	11.89	11.96	12.03
Open Circuit Voltage (Voc) [V]	45.49	45.69	45.89	46.09
Short Circuit Current (Isc) [A]	12.38	12.45	12.52	12.59
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

