

# SF-M18/108

## 400-415W

### 182\*91mm cells 54

**Bifacial single glass**

**PERC half-cell module**

Max Power out:415W

Max Efficiency:21.25%

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).

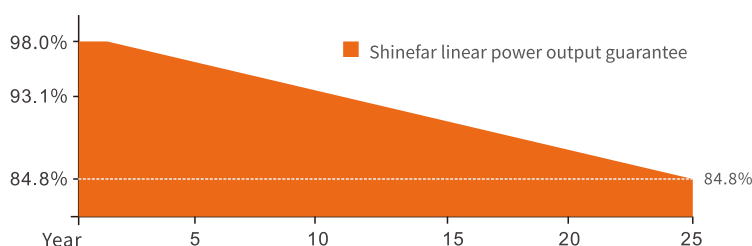


#### High energy generation, low LCOE

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

### Superior Warranty

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

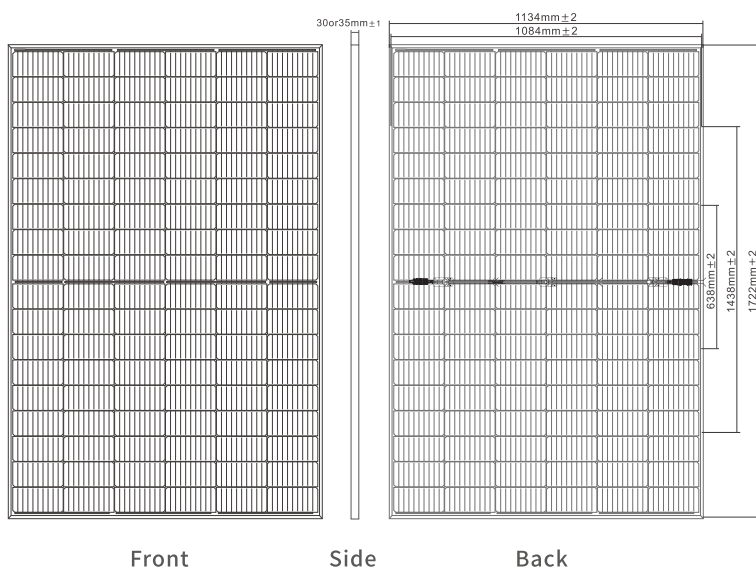


### Comprehensive Products and System Certificates

- 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	1722x1134x30mm or 1722x1134x35mm
Weight	20kg
packing	37/31/pallet,962/806/40hq
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 <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-M18/108400		SF-M18/108405		SF-M18/108410		SF-M18/108415	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax) [W]	400	296.8	405	300.51	410	304.22	415	307.93
Maximum Power Voltage (Vmp) [V]	31.01	28.84	31.18	29.00	31.35	29.16	31.52	29.31
Maximum Power Current (Imp) [A]	12.90	10.29	12.99	10.36	13.08	10.43	13.17	10.50
Open Circuit Voltage (Voc) [V]	37.07	34.48	37.16	34.56	37.25	34.64	37.34	34.73
Short Circuit Current (Isc) [A]	13.75	10.97	13.86	11.06	13.97	11.14	14.07	11.23
Module Efficiency[%]	20.48		20.74		21.00		21.25	
Cell Type[mm]	Mono 182x91,108 cells							
Operational Temperature[°C]	-40~+85°C							
Maximum System Voltage	1500V DC							
Max Series Fuse Rating	25A							

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

Total Equivalent power(Pmax)[Wp]	428	433.35	438.7	444.05
Maximum Power Voltage (Vmp) [V]	31.01	31.18	31.35	31.52
Maximum Power Current (Imp) [A]	13.80	13.90	13.99	14.09
Open Circuit Voltage (Voc) [V]	37.07	37.16	37.25	37.34
Short Circuit Current (Isc) [A]	14.71	14.83	14.94	15.06
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

