

# SF-M18/G120

## 445-460W

### 182×91mm cells 60

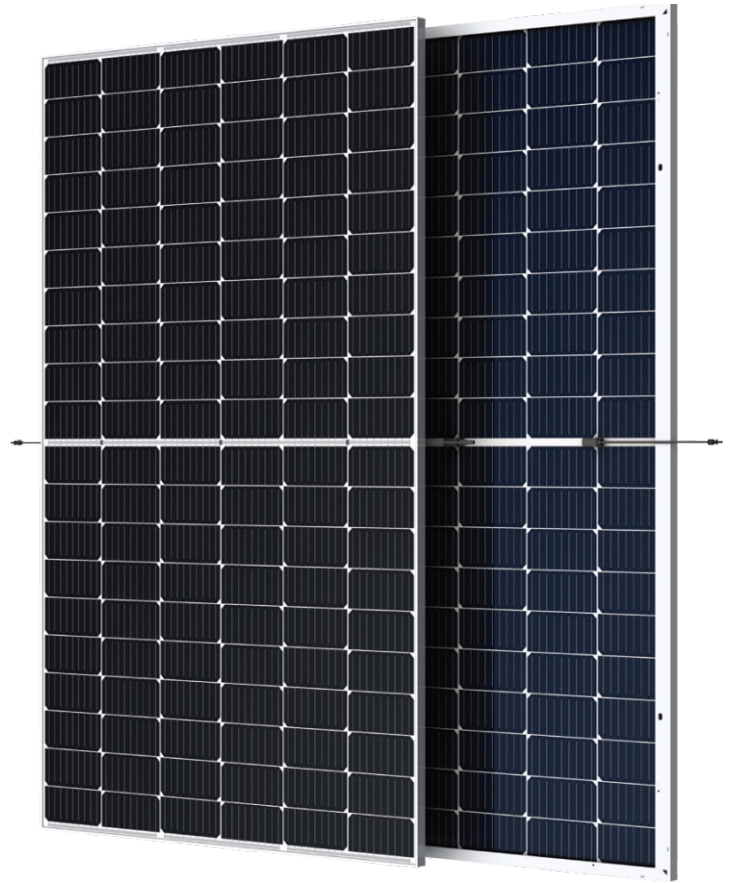
#### Bifacial Double Glass

#### PERC Half-Cell Module

Max Power out: 460W

Max Efficiency: 21.28%

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).

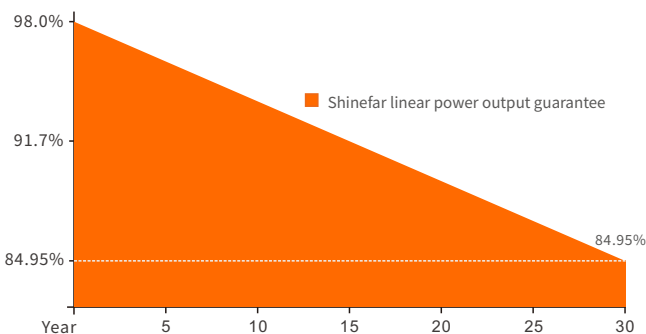


#### High energy generation, low LCOE

Low Pmax temp coefficient increases energy production

### Superior Warranty

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

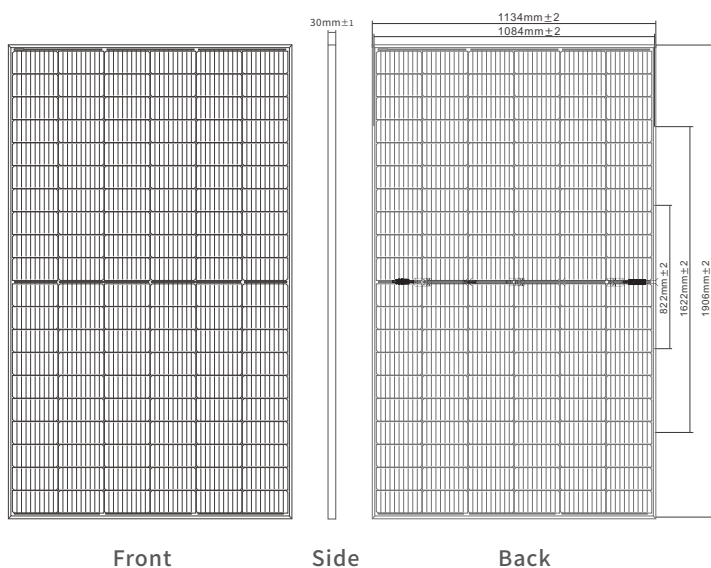


### Comprehensive Products and System Certificates

- 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	1906 × 1134 × 30mm
Weight	26.5kg
Packing	37/pallet, 888/40hq
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-M18/G120445		SF-M18/G120450		SF-M18/G120455		SF-M18/G120460	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax) [W]	445	330.19	450	333.90	455	337.61	460	341.32
Maximum Power Voltage (Vmp) [V]	34.33	31.93	34.48	32.07	34.63	32.21	34.78	32.35
Maximum Power Current (Imp) [A]	12.96	10.34	13.05	10.41	13.14	10.48	13.23	10.55
Open Circuit Voltage (Voc) [V]	41.21	38.33	41.36	38.46	41.51	38.60	41.66	38.74
Short Circuit Current (Isc) [A]	13.76	10.98	13.84	11.04	13.91	11.10	13.98	11.15
Module Efficiency [%]	20.59		20.82		21.05		21.28	
Cell Type [mm]	Mono 182 × 91, 120 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]	490	495	501	506
Maximum Power Voltage (Vmp) [V]	34.33	34.48	34.63	34.78
Maximum Power Current (Imp) [A]	14.26	14.36	14.45	14.55
Open Circuit Voltage (Voc) [V]	41.21	41.36	41.51	41.66
Short Circuit Current (Isc) [A]	15.14	15.22	15.30	15.38
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

