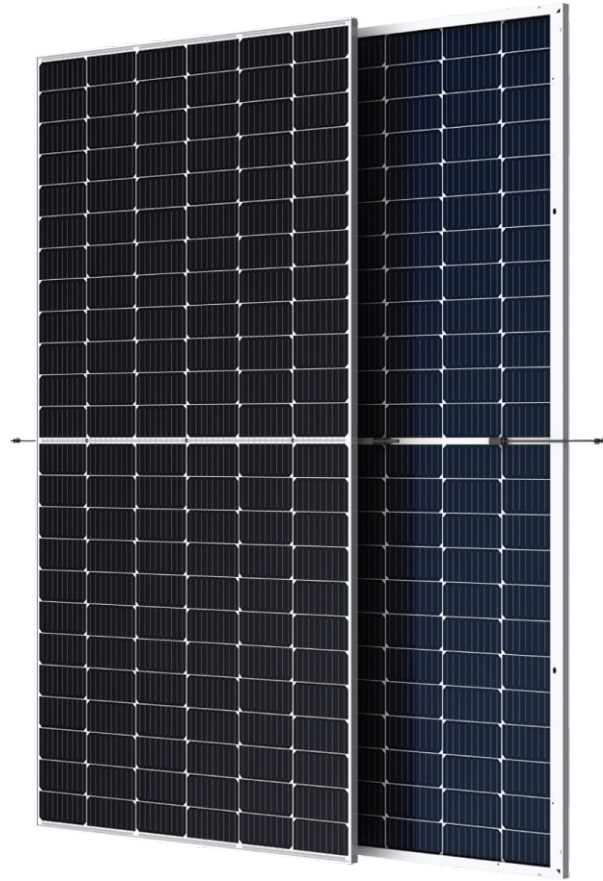


# SF-M18/G144

## 580-595W

### 182±1.5×91±1.5mm

### Cells 144



### Bifacial Double Glass

### N-TYPE Half-Cell Module

Max Power Out: 595W

Max Efficiency: 23.03%

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).

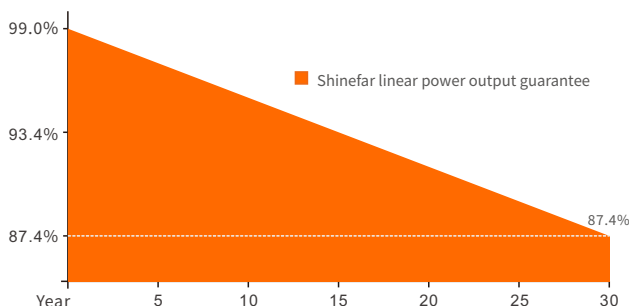


#### High Energy Generation, Low LCOE

Low Pmax temp coefficient increases energy production

### Superior Warranty

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

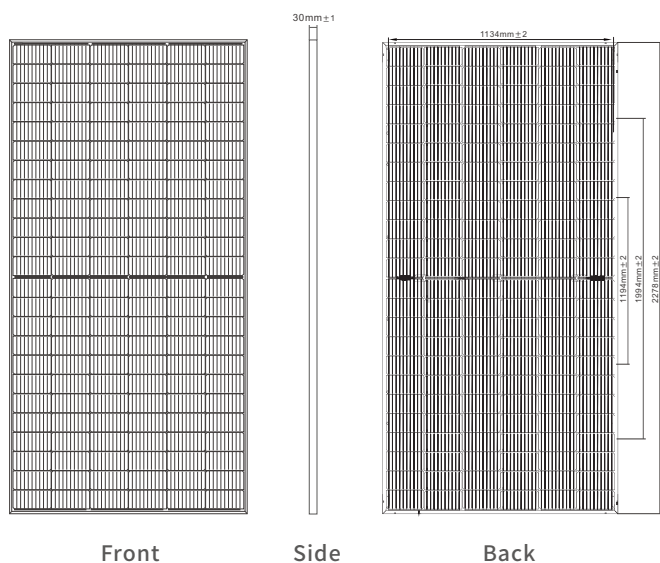


### Comprehensive Products and System Certificates

- 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 Certificate Body (CB)
- UKCA:EN61730-2018
- ISO9001 & ISO14001 & ISO45001



## Engineering Drawings



## Structural Parameter

|                      |   |
|----------------------|---|
| Dimensions of Module | 2278 × 1134 × 30mm                              |
| Weight               | 33.2kg  |
| Packing              | 37PCS/Pallet, 740PCS/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-M18/144580                        |        | SF-M18/144585 |        | SF-M18/144590 |        | SF-M18/144595 |        |
|---------------------------------|--------------------------------------|--------|---------------|--------|---------------|--------|---------------|--------|
|                                 | STC                                  | NOCT   | STC           | NOCT   | STC           | NOCT   | STC           | NOCT   |
| Maximum Power (Pmax) [W]        | 580                                  | 434.42 | 585           | 438.17 | 590           | 441.91 | 595           | 445.66 |
| Maximum Power Voltage (Vmp) [V] | 42.91                                | 40.12  | 43.07         | 40.27  | 43.23         | 40.42  | 43.39         | 40.57  |
| Maximum Power Current (Imp) [A] | 13.52                                | 10.83  | 13.58         | 10.88  | 13.65         | 10.93  | 13.71         | 10.98  |
| Open Circuit Voltage (Voc) [V]  | 50.80                                | 47.50  | 50.95         | 47.64  | 51.10         | 47.78  | 51.25         | 47.92  |
| Short Circuit Current (Isc) [A] | 14.55                                | 11.65  | 14.62         | 11.71  | 14.70         | 11.77  | 14.77         | 11.83  |
| Module Efficiency [%]           | 22.45                                |        | 22.65         |        | 22.84         |        | 23.03         |        |
| Cell Type [mm]                  | Mono 182 ± 1.5 × 91 ± 1.5, 144 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] | 638   | 644   | 649   | 655   |
| Maximum Power Voltage (Vmp) [V]    | 42.91 | 43.07 | 43.23 | 43.39 |
| Maximum Power Current (Imp) [A]    | 14.87 | 14.94 | 15.01 | 15.08 |
| Open Circuit Voltage (Voc) [V]     | 50.80 | 50.95 | 51.10 | 51.25 |
| Short Circuit Current (Isc) [A]    | 16.00 | 16.08 | 16.17 | 16.25 |
| Irradiance Ratio (Rear/Front)      | 10%   |       |       |       |

## Temperature Ratings

|                                    |           |
|------------------------------------|-----------|
| Nominal Operating Cell Temperature | 45 ± 2°C  |
| Temperature Coefficient of Isc     | +0.05%/°C |
| Temperature Coefficient of Voc     | -0.23%/°C |
| Temperature Coefficient of Pmax    | -0.30%/°C |

## Curve Diagram

