

# SUNFUTURE

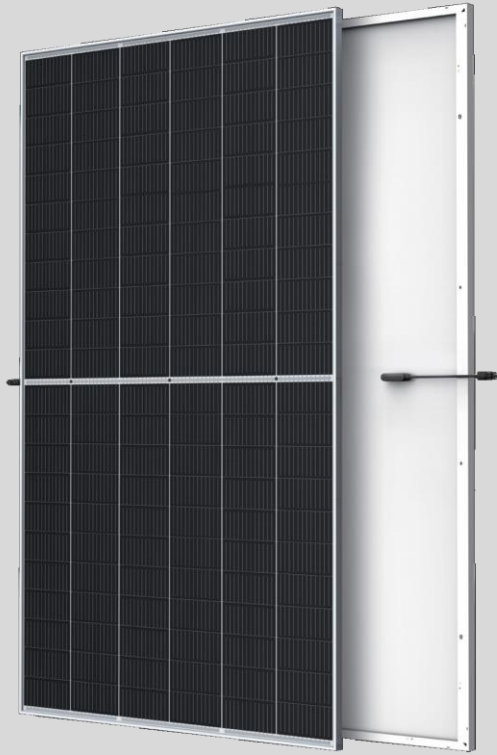


## MORE BRIGHT FUTURE FROM

### SF-132HCM12

## SUNFUTURE

### HALF CELL 650W 655W 660W 665W 670W



High transmissivity, low-iron tempered glass



Using high efficiency mono solar cells

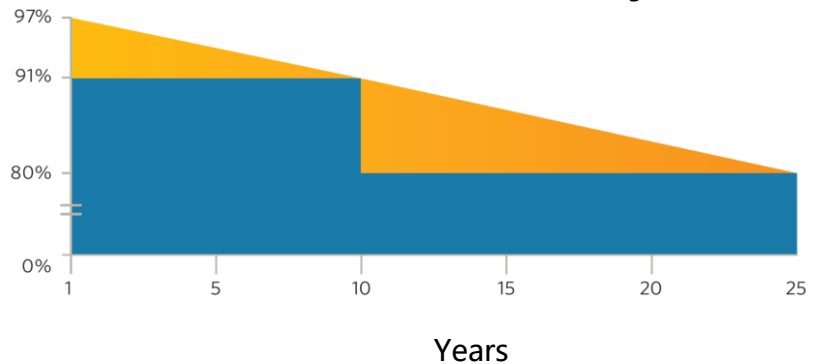


High quality junction box and connector systems



100% inspection to guarantee the reliable of solar systems

### 25 Years Linear Warranty



**21.60%**  
CELL EFFICIENCY  
**12 YEAR**  
PRODUCT WARRANTY  
**0~+5W**  
POWER TOLERANCE

SF's Linear Performance Warranty  
 Industry Standard Warranty

### MANAGEMENT SYSTEM



ISO 9001:  
Quality management system



ISO 14001:  
Standard for environmental management system



OHSAS 18001:  
Internation standard for occupational health and safety assessment system

**BLACK** \*BLACK FRAME/BLACK BACK-SHEET  
PRODUCTS ARE AVAILABLE UPON REQUEST

PRODUCT  
CERTIFICATES



[www.sunfuturetech.com](http://www.sunfuturetech.com)  
More bright future from Sunfuture

20211002V05

## ELECTRICAL PERFORMANCE

### Electrical parameters at STC & NOCT

Module type	SF650-132HCM12		SF655-132HCM12		SF660-132HCM12		SF665-132HCM12		SF670-132HCM12	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power-Pmax(W)	650	492	655	496	660	500	665	504.0	670	508
Module efficiency-ηm(%)	20.9	/	21.1	/	21.20	/	21.40	/	21.6	/
Voltage at Pmax-Vmp(V)	37.4	34.9	37.6	35.1	37.8	35.3	38.0	35.4	38.2	35.6
Current at Pmax-Imp(A)	17.39	14.09	17.43	14.13	17.47	14.17	17.51	14.22	17.55	14.26
Open-circuit voltage-Voc(V)	45.3	42.7	45.5	42.9	45.7	43.0	45.9	43.2	46.1	43.4
Short-circuit current-Isc(A)	18.44	14.86	18.48	14.89	18.53	14.93	18.57	14.96	18.62	15.01

STC: 1000W/m<sup>2</sup> irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3.

NOCT: open-circuit module operation temperature at 800W/m<sup>2</sup> irradiance, 20°C ambient temperature, 1m/s wind speed.

## THERMAL CHARACTERISTICS

Nominal operating cell temperature (NOCT)	43°C±2
Temperature coefficient of Pmax	-0.34%/°C
Temperature coefficient of Voc	-0.25%/°C
Temperature coefficient of Isc	+0.04%/°C

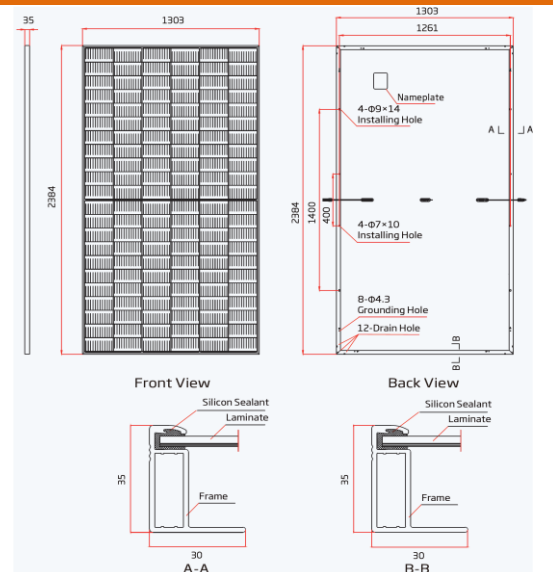
## Packing Configuration

Container	40'HQ
Pieces per pallet	31
Pallets per container	18
Pieces per container	558

## OPERATING CONDITIONS & DIMENSION

No. of cells	210MM 132 cells
Max. system voltage	1500VDC
Max. series fuse rating	30A
Operating temperature range	-40°C to 85°C
Max. static load, front (e.g., snow)	5400Pa
Max. static load, back (e.g., wind)	2400Pa
Dimension(mm)	2384×1303×35
Weight	33.6kg
Frame colour	Silver/Black

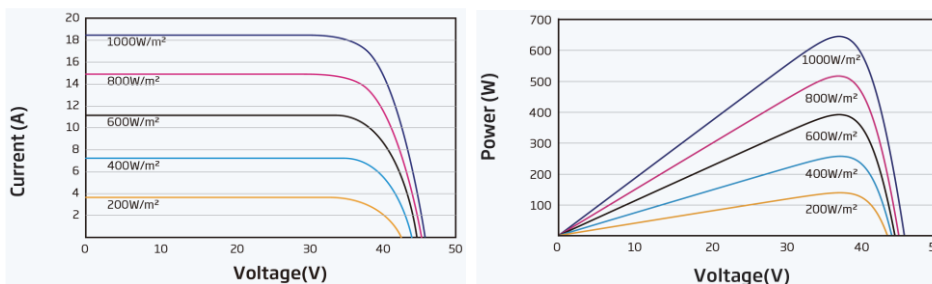
## Dimension Drawing



Unit: mm

## I-V Graph

Current-Voltage & Power-Voltage Curves (SF650-132HCM12)



\*The above drawing is a graphical representation of the product.  
 \*For engineering quality drawings please contact SUNFUTURE.  
 \*OEM/ODM order is welcomed.