

# Shingled monofacial module

## AN-SMSP



### Features of Module



#### Shingling Technology

Innovative structure, low-temperature adhesive bonding, high-density layout.



#### Beautiful Appearance

Uniform layout, better aesthetic.



#### Superior Safety and Reliability

No hidden welding crack, low operating temperature, high pressure resistance.



#### Low System Cost

High module efficiency, reducing system cost.



#### Low Hot Spot Risk

Parallel circuit design reduces shading loss.



#### Low Shading Loss

Full parallel arrangement brings high effective power generation hours.



#### Eco-friendly

Adhering to green philosophy, no fluorine and low lead.

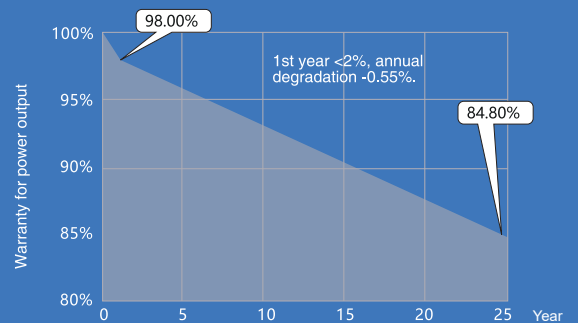
### Linear Power Output Warranty

**15**

15-year warranty for materials.

**25**

25-year warranty for linear power output.



## Electrical Characteristics (STC)

Module type: TH***PM5-AN-SMSP	450
Maximum power - P <sub>m</sub> (W)	450
Open circuit voltage - V <sub>oc</sub> (V)	37.66
Short circuit current I <sub>sc</sub> (A)	14.09
Voltage at maximum power point - V <sub>m</sub> (V)	31.92
Current at maximum power point - I <sub>m</sub> (A)	14.09
Module efficiency -η (%)	21.45

## Mechanical Parameters

Size	2148×990×35mm (L×W×H)
Weight	23.4kg
Front glass	White toughened safety glass, 3.2mm
Cell	210*210 PERC solar cells
Frame	Anodized aluminum profile
Junction box	IP68,TUV, 2 diodes
Cable	Length 900mm, 1 x4mm <sup>2</sup>

## Packaging mode

Container	20'GP
Number of modules per container	384
Container	40'HQ
Number of modules per container	864

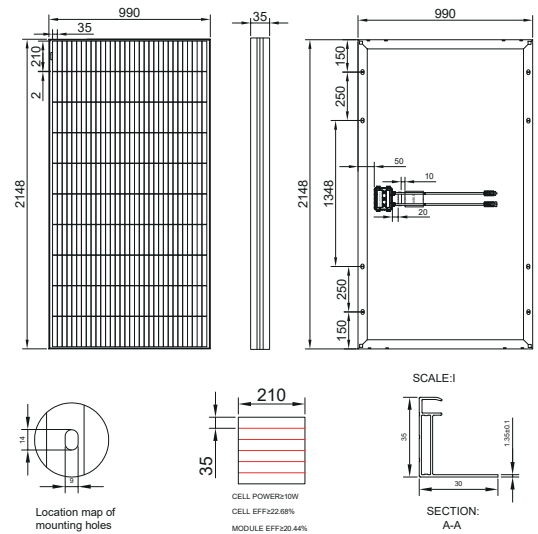
## Temperature Parameters

NMOT	42.30 °C (±2°C)
Open circuit voltage temperature coefficient	-0.27%/°C
Short circuit current temperature coefficient	+0.04%/°C
Maximum power temperature coefficient	-0.34%/°C

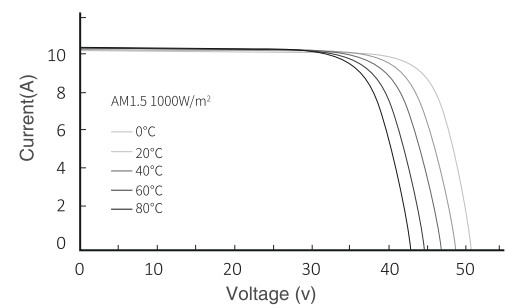
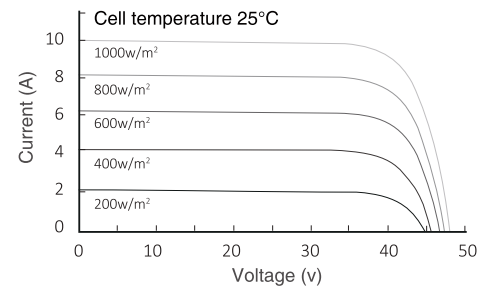
## Maximum Rated Parameters

Maximum system voltage (V)	DC1500 (IEC)
Maximum fuse rated current (A)	20
Maximum front static load (Pa)	5400
Working temperature (°C)	-40~+ 85
Hail resistance	Maximum diameter 25mm, impact speed 23m/s

## Drawings



## I-V Curve



### Statement:

With technological progress and product updates, there may be deviations between the technical parameters of Aern's module products and the technical parameters contained in this specification, and Aern Solar has the right to adjust the technical parameters at any time without notifying the customer, the final interpretation of the technical specification is vested in Aern.