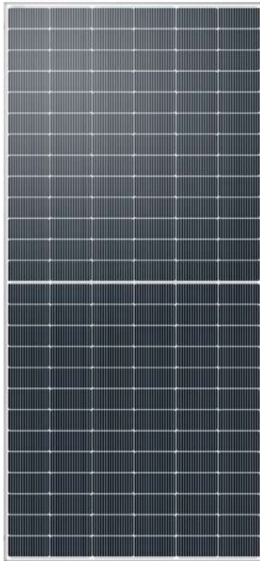


# HT78-18X(ND)-F

Double Glass TOPCon PV Module

**HIGH** High power

**635W/640W**  
**645W/650W/655W**



- Module Efficiency 23.4%
- No. of Cells 156(6×26)
- Weight 35.5(±0.5)kg
- Dimensions 2465×1134×35mm
- Bifaciality 80(±5)%



Shanghai Aerospace Automobile  
Electromechanical Co., Ltd.  
Website: [www.ht-saae.com](http://www.ht-saae.com)  
E-mail: [pvmarketing@ht-saae.com](mailto:pvmarketing@ht-saae.com)



Factory:  
Lianyungang Shenzhou New Energy CO., Ltd.



Half cut cell technology  
can reduce the  
internal power loss  
and improve module  
overall power.  
Excellent heat  
dissipation avoids hot  
spot production.

**15Ys**

Products warranty

**30Ys**

Warranty on power output

**EL**

Microcrack resistant  
Double glass structure  
enhance reliability,  
double EL tested of high  
quality control.



Entire module certified to  
with stand extreme  
wind(2400 Pa) and snow  
loads (5400 Pa)

**TOPCon**

Double glass, The optimized  
number and width of main  
gate lines, Maximize the light  
receiving area of modules  
and Reduce module power  
consumption.



**1500V**

Designed for high voltage  
systems of up to 1500 VDC,  
increasing the string length  
of solar systems and saving  
on BoS costs.



**2%**

All the modules are  
sorted and packaged by  
amperage, reducing  
mismatch losses and  
maximizing system output.

**0~+3%**

Positive tolerance  
0~+3% guaranteed

**Anti PID**

PID resistant

**Comprehensive and first-rate  
certification system**

IEC 61215, IEC 61730 Latest Standard  
SA 8000, ISO 9001, ISO 14001 and ISO 45001  
meeting the highest international standards  
Strict quality control



### Electrical Characteristics (STC)

| Module Type                | HT78-18X(ND)-F |        |        |        |        |
|----------------------------|----------------|--------|--------|--------|--------|
| Maximum Power(Pmax)        | 635W           | 640W   | 645W   | 650W   | 655W   |
| Open Circuit Voltage(Voc)  | 55.9V          | 56.1V  | 56.2V  | 56.3V  | 56.4V  |
| Short Circuit Current(Isc) | 14.46A         | 14.53A | 14.60A | 14.67A | 14.74A |
| Maximum Power Voltage(Vmp) | 46.2V          | 46.4V  | 46.5V  | 46.6V  | 46.7V  |
| Maximum Power Current(Imp) | 13.75A         | 13.81A | 13.88A | 13.96A | 14.04A |
| Module Efficiency          | 22.7%          | 22.9%  | 23.1%  | 23.3%  | 23.4%  |
| Power Tolerance            | 0 ~ +3%        |        |        |        |        |
| Maximum System Voltage     | 1500V DC(IEC)  |        |        |        |        |
| Maximum Series Fuse Rating | 25A            |        |        |        |        |
| Operating Temperature      | -40°C to +85°C |        |        |        |        |

\* STC: AM 1.5, Irradiance 1000W/m<sup>2</sup>, module temperature 25°C

### Electrical Characteristics (NMOT)

| Module Type                | HT78-18X(ND)-F |        |        |        |        |
|----------------------------|----------------|--------|--------|--------|--------|
| Maximum Power(Pmax)        | 483W           | 487W   | 490W   | 494W   | 498W   |
| Open Circuit Voltage(Voc)  | 53.7V          | 53.9V  | 54.0V  | 54.0V  | 54.1V  |
| Short Circuit Current(Isc) | 11.65A         | 11.71A | 11.77A | 11.82A | 11.88A |
| Maximum Power Voltage(Vmp) | 44.4V          | 44.5V  | 44.6V  | 44.7V  | 44.8V  |
| Maximum Power Current(Imp) | 10.88A         | 10.94A | 10.99A | 11.05A | 11.12A |

\* NMOT: Irradiance 800W/m<sup>2</sup>, ambient temperature 20°C, wind speed 1m/s

### Bifacial output-rearside power gain

|     |                     |       |       |       |       |       |
|-----|---------------------|-------|-------|-------|-------|-------|
| 5%  | Maximum Power(Pmax) | 667W  | 672W  | 677W  | 683W  | 688W  |
|     | Module Efficiency   | 23.9% | 24.0% | 24.2% | 24.4% | 24.6% |
| 15% | Maximum Power(Pmax) | 730W  | 736W  | 742W  | 748W  | 753W  |
|     | Module Efficiency   | 26.1% | 26.3% | 26.5% | 26.7% | 26.9% |
| 25% | Maximum Power(Pmax) | 794W  | 800W  | 806W  | 813W  | 819W  |
|     | Module Efficiency   | 28.4% | 28.6% | 28.8% | 29.1% | 29.3% |

Nominal Module Operating Temperature(NMOT) 43±2°C

Temperature Coefficient of Pmax γ (Pm) -0.29%/°C

Temperature Coefficient of Voc β (Voc) -0.25%/°C

Temperature Coefficient of Isc α (Isc) 0.046%/°C

Solar Cells Monocrystalline

No. of Cells 156 (6×26)

Dimensions 2465×1134×35mm

Weight 35.5 (±0.5) kg

Glass (Front /Back) High transmission coated tempered glass/Heat strengthened glass

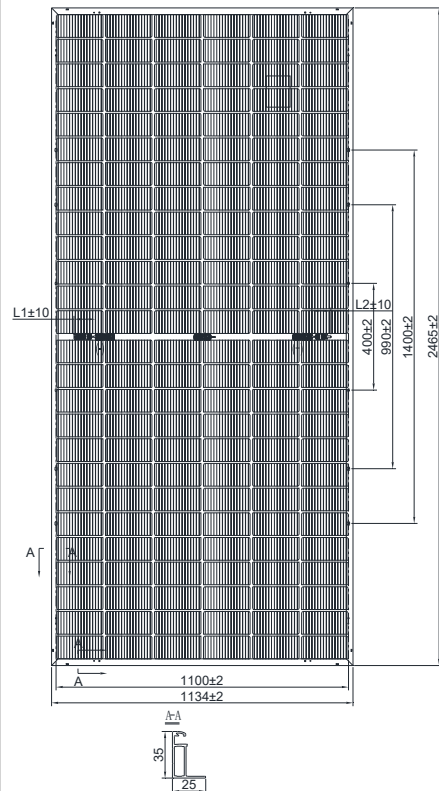
Frame Anodized aluminum alloy

Junction Box IP68

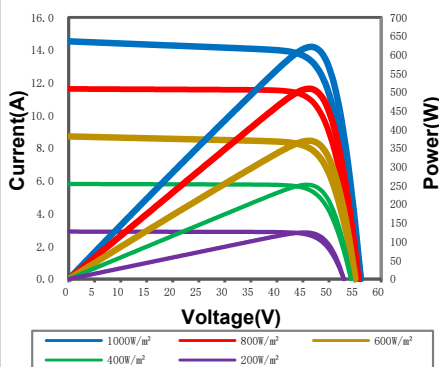
Cable 4mm<sup>2</sup> (IEC) Length: (+) 200mm, (-) 300mm or customized

Connectors MC4 / MC4 Compatible

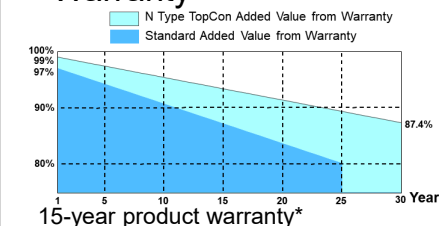
Packaging Configuration 31 pcs/box: 496 pcs/ 40' HQ Container



### IV Curves



### Warranty



30-year warranty on power output\*

\* Specific information is referred to the product quality guarantee

\*The module recycling should be carried out by the professional institutions at the end of module life cycle

\*Copyright@2024V4 Specifications are subject to change without further notification