



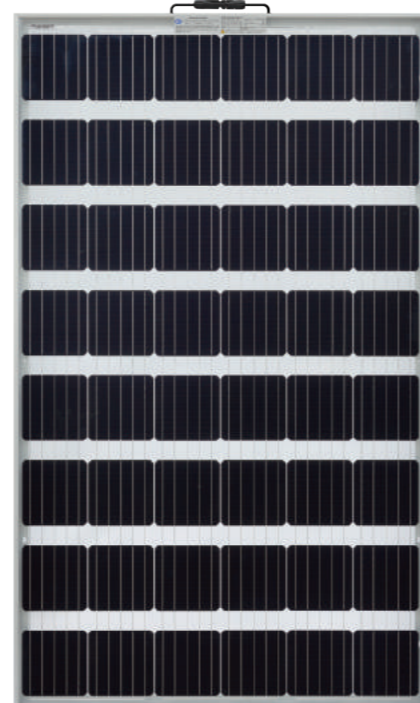
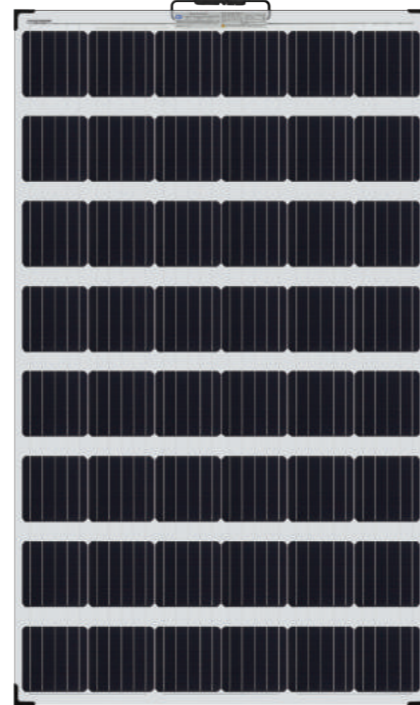
Solar Module

* V means 1500V module

HT48-156M(NDV) HT48-156M(NDV)-F 225W-240W

[Bifacial Module]

Bifacial generating capacity ,
output 258W/264W/270W/276W(15% increase)



- Absorb the light by both surfaces of the cells
- 14.6% Module Efficiency
- PID resistant
- N-Type mono technology, effectively increase the output power of unit area
- All the modules are sorted and packaged by amperage, reducing mismatch losses and maximizing system output.
- 10Ys Products Warranty
- Better temperature coefficient
- Better low irradiation response provides more effective working time
- Advanced surface treatment , lower surface reflection and 5BB cell design can reduce the series resistance and improve the module efficiency
- Designed for high voltage systems of up to 1500 VDC, increasing the string length of solar systems and saving on BoS costs
- Microcrack resistant Double glass structure enhance reliability, triple EL tested of high quality control.
- 0 Initial light induced degradation, effectively increase the overall power generation amount
- TUV certification
- 30Ys Warranty on power output
- Entire module certified to with stand extreme wind (2400 Pa) and snow loads (5400 Pa)
- Positive tolerance 0/+5w guaranteed

Electrical Characteristics(STC)

Module	HT48-156M(NDV) / HT48-156M(NDV)-F			
Maximum Power at STC(Pmax)	225W	230W	235W	240W
Open-Circuit Voltage(Voc)	30.9V	31.1V	31.3V	31.5
Short-Circuit Current(Isc)	9.39A	9.44A	9.49A	9.54
Optimum Operating Voltage (Vmp)	25.1V	25.4V	25.8V	26.1
Optimum Operating Current(Imp)	8.98A	9.06A	9.14A	9.22
Module Efficiency	13.7%	14.0%	14.3%	14.6%
Power Tolerance	0 ~ +5W			
Maximum System Voltage	1500V DC(IEC)			
Maximum Series Fuse Rating	15A			
Operating Temperature	-40 °C to +85 °C			

* Irradiance 1000W/m², module temperature 25, AM=1.5

NOCT

Module	HT48-156M(NDV) / HT48-156M(NDV)-F			
Maximum Power	165W	169W	173W	176W
Open Circuit Voltage (Voc)	28.4V	28.6V	28.8V	29.0V
Short-Circuit Current(Isc)	7.59A	7.63A	7.67A	7.71A
Optimum Operating Voltage (Vmp)	23.0V	23.3V	23.7A	23.9A
Maximum Circuit Current (Imp)	7.17A	7.24A	7.28A	7.36A
NOCT	43°C±2°C			

NOCT: Irradiance 800W/m², ambient temperature 20 °C, wind speed 1 m/s

Mechanical Characteristics

Solar Cells	N type mono-crystalline cell 156.75*156.75mm 5BB		
No. of Cells	48 (6 × 8)		
Dimensions	1658mm×992mm×6.5mm / 1658mm×992mm×35mm		
Weight	25kg/22.5kg(F)		
Junction Box	IP67 , 3 diodes		
Snow pressure	5400Pa		
Wind pressure	2400Pa		
Area	1.64m²		
Light Transmittance	28.7%		
Packaging Configuration	33pcs/box, 1584pcs/17.5m Trailer; 33pcs/box, 858pcs/40'HQ Container 26pcs/box, 1560pcs/17.5m Trailer; 30pcs/box, 840pcs/40'HQ Container (F)		

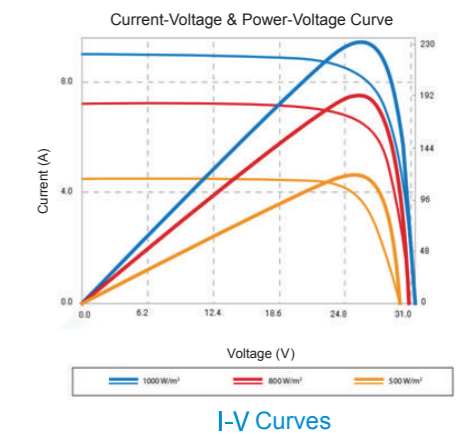
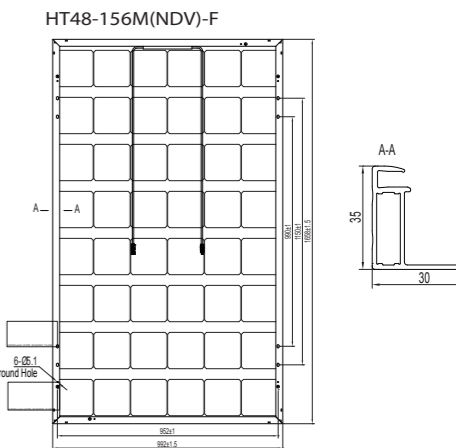
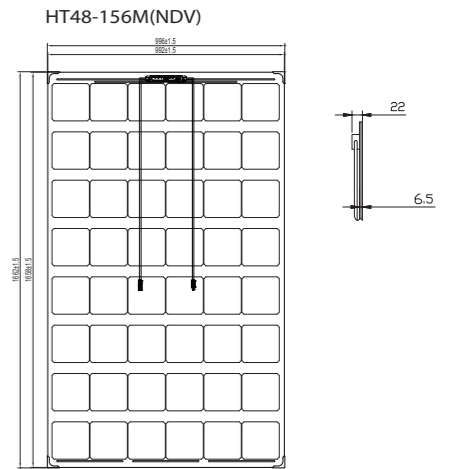
Temperature Characteristics

Temperature Coefficient of Pmax	γ (Pm)	-0.39%/K
Temperature Coefficient of Voc	β (Voc)	-0.28%/K
Temperature Coefficient of Isc	α (Isc)	0.045%/K

Warranty

10-year product warranty	
30-year warranty on power output	
Specific information is referred to the product quality guarantee	

Information Box



I-V Curves

Shanghai Aerospace Automobile Electromechanical Co., Ltd.
website: www.ht-saae.com

Factory : Lianyungang ShenZhou New Energy Co., Ltd.