



HT Solar Energy J.S.C.

Shanghai Aerospace Automobile Electromechanical Co., Ltd.

HIGHWAY

SUSTAINING INNOVATION
SINCE 1960S

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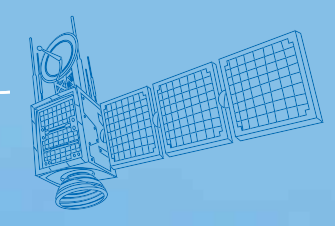
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HT-SAAE A Large Scale State-Owned Company

Shanghai Aerospace Automobile Electromechanical Co. Ltd.,(HT-SAAE) belongs to China Aerospace Science & Technology Corporation, and Shanghai Academy of Spaceflight Technology. HT-SAAE started its research on solar technology application in space since 1960's.

As a large scale state-owned company, HT-SAAE owns a vertically-integrated industry chain from silicon ingots, wafers, cells, solar modules to solar systems and its subsidiaries have formed three main industry bases in Inner Mongolia, Shanghai and Jiangsu.

Since the beginning of 21st century, we have undertaken around 600 solar PV systems, including the "Bright Project" in west of China, The roof-top solar system for 2010 World EXPO. Solar plant in Jia Yuguan, China and solar plants in Italy and Germany.



ORISI Silicon Co.,Ltd

Silicon



Shanghai Shenzhou New Energy Development Co., Ltd

Wafers



Lianyungang Shenzhou New Energy Co., Ltd

Solar Cells



Shanghai Solar Energy S&T Co., Ltd

PV Modules



HT Solar Energy J.S.C.

PV Systems

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Solar Module

HT60-156M HT60-156M(V) 280W-300W

* V means 1500V module



Advanced surface treatment , less surface reflection and 5BB cell design can reduce the series resistance and improve the module efficiency



18.4%
Module Efficiency



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



TUV certification



Higher module's output power



Certified to withstand dynamic mechanical load 1000 Pascal



HT-SAAE guarantees highest production standards: IEC 61215, IEC 61730, IEC 62716 (Ammonia corrosion) & IEC 61701 (Salt Mist Corrosion)



PID resistant



Microcrack resistant
Triple EL tested of high quality control.



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



10 Ys
Products Warranty



25 Ys
Warranty on power output



Strict quality control, meeting the highest international standards: ISO 9001, ISO14001 and OHSAS18001



5W
Positive tolerance 0/+5w guaranteed



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



Electrical Characteristics

Module	HT60-156M / HT60-156M(V)				
	280W	285W	290W	295W	300W
Maximum Power at STC(Pmax)	280W	285W	290W	295W	300W
Open-Circuit Voltage(Voc)	38.6V	38.8V	39.0V	39.7V	39.9
Short-Circuit Current(Isc)	9.32A	9.39A	9.46A	9.64A	9.71
Optimum Operating Voltage (Vmp)	32.4V	32.8V	33.2V	32.4V	32.8V
Optimum Operating Current(Imp)	8.65A	8.70A	8.75A	9.12A	9.16A
Module Efficiency	17.2%	17.5%	17.8%	18.1%	18.4%
Power Tolerance	0 ~ +5W				
Maximum System Voltage	1000V/1500V DC				
Maximum Series Fuse Rating	15A				
Operating Temperature	-40 to +85				
STC:Irradiance 1000W/m ² , module temperature 25, AM=1.5					
Optional black frame or white frame module according to customer requirements					

NOCT

Module	HT60-156M / HT60-156M(V)				
	207W	210W	214W	218W	221W
Maximum Power	207W	210W	214W	218W	221W
Open Circuit Voltage (Voc)	36.0V	36.2V	36.4V	37.0V	37.2V
Short Circuit Current (Isc)	7.53A	7.59A	7.64A	7.79A	7.84A
Maximum Power Voltage (Vmp)	30.2V	30.5V	30.9V	30.2V	30.5V
Maximum Circuit Current (Imp)	6.85A	6.88A	6.92A	7.21A	7.24A
NOCT	45 °C ± 2 °C				
NOCT : Irradiance 800W/m ² , ambient temperature 20 , wind speed 1 m/s					

Mechanical Characteristics

Solar Cells	Monocrystalline 156.75 × 156.75mm
No. of Cells	60 (6 × 10)
Dimensions	1640mm × 992mm × 35mm (64.6 × 39 × 1.4in)
Weight	18.5kg (40.8lbs)
Front Glass	High transmission tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP67
Cable	4mm ² (IEC), 900mm
Connectors	MC4/MC4 Compatible
Packaging Configuration	30pcs/box, 910pcs/40'HQ Container

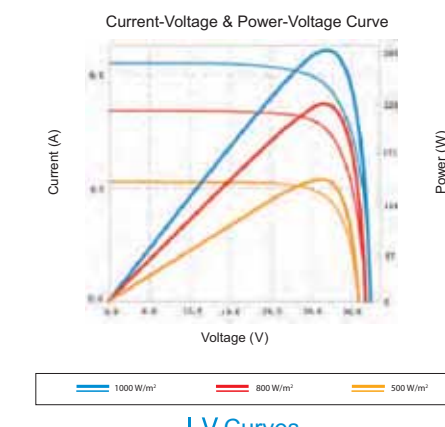
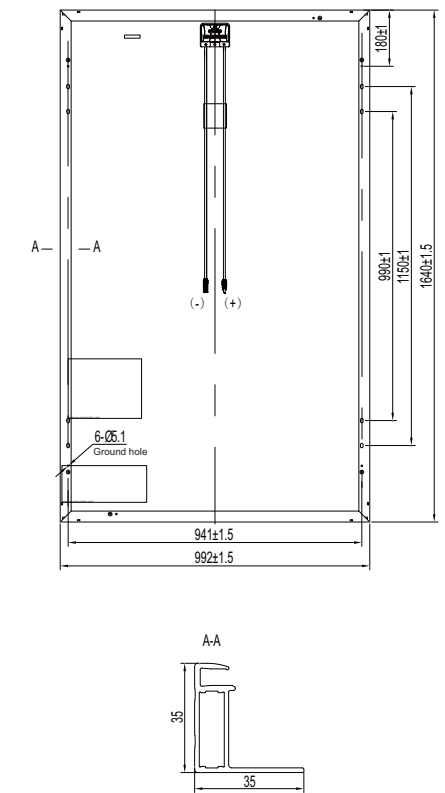
Temperature Characteristics

Temperature Coefficient of Pmax	γ (Pm)	-0.39%/K
Temperature Coefficient of Voc	β (Voc)	-0.29%/K
Temperature Coefficient of Isc	α (Isc)	0.049%/K

Warranty

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

Information Box



Shanghai Aerospace Automobile Electromechanical Co., Ltd.
HT Solar Energy J.S.C.
Factory : Lianyungang ShenZhou New Energy Co., Ltd.
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