

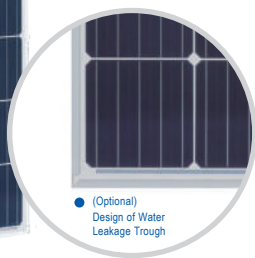
# HT60-156M

Big Size: Cell 158.75\*158.75

## 315W / 320W 325W / 330W / 335W



- Module Efficiency: 20.1%
- No. of Cells: 60 (6 × 10)
- Weight: 18.5kg
- Dimensions: 1665mm×1002mm×35mm



● (Optional)  
Design of Water  
Leakage Trough

Monocrystalline  
158.75 × 158.75mm



HT-SAAE started on solar technology  
research for China's Satellite Application  
since 1960

Shanghai Aerospace Automobile  
Electromechanical Co., Ltd  
website: [www.ht-saae.com.au](http://www.ht-saae.com.au)



Factory :  
Lianyungang ShenZhou New Energy Co., Ltd.



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



**Microcrack resistant  
Triple EL tested of  
high quality control**



**Designed for high  
voltage systems of up  
to 1000 VDC, increasing  
the string length of solar  
systems and saving on  
BoS costs**



**Design Load/Safety  
Factors:  
2400 Pa / 1.5 (Wind)  
2400 Pa / 1.5 (Snow)**



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

**Comprehensive and first-rate  
certification system**

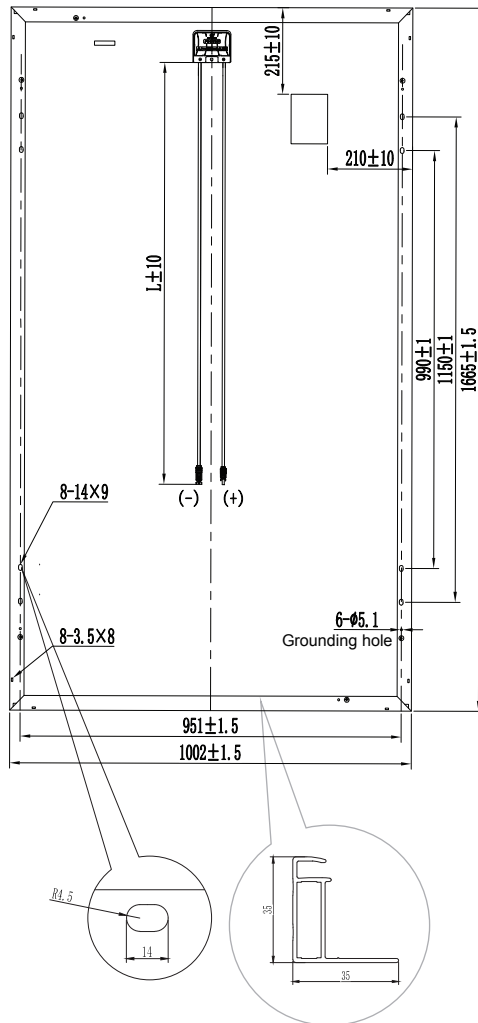
IEC61215: 2016, IEC61730: 2016 Latest Standard  
ISO9001, ISO14001 and OHSAS18001,  
meeting the highest international standards  
Strict quality control



IEC 61215  
IEC 61730  
Regular Production  
Surveillance  
[www.tuv.com](http://www.tuv.com)

**Made in China**

#### • Engineering Drawing



#### • Electrical Characteristics

Module	HT60-156M				
Maximum Power at STC(P <sub>max</sub> )	315W	320W	325W	330W	335W
Open-Circuit Voltage(V <sub>oc</sub> )	40.1V	40.2V	40.3V	40.4V	40.5V
Short-Circuit Current(I <sub>sc</sub> )	10.36A	10.49A	10.61A	10.74A	10.87A
Optimum Operating Voltage (V <sub>mp</sub> )	33.7V	33.8V	33.9V	34.1V	34.3V
Optimum Operating Current(I <sub>mp</sub> )	9.37A	9.49A	9.60A	9.69A	9.78A
Module Efficiency	18.9%	19.2%	19.5%	19.8%	20.1%
Power Selection	0 ~ +5W				
Tolerance	P <sub>max</sub> :±3%;V <sub>oc</sub> :±5%;I <sub>sc</sub> :±5%				
Maximum System Voltage	1000V DC(IEC)				
Maximum Series Fuse Rating	15A				
Operating Temperature	-40 °C to +85 °C				

\*STC: Irradiance 1000W/m<sup>2</sup>, module temperature 25, AM=1.5  
Optional black frame or white frame module according to customer requirements

#### • NMOT

Module	HT60-156M				
Maximum Power	233W	237W	241W	244W	248W
Open Circuit Voltage (V <sub>oc</sub> )	37.9V	38.0V	38.1V	38.2V	38.3V
Short Circuit Current (I <sub>sc</sub> )	8.37A	8.47A	8.57A	8.67A	8.78A
Maximum Power Voltage (V <sub>mp</sub> )	31.8V	31.9V	32.0V	32.2V	32.4V
Maximum Circuit Current (I <sub>mp</sub> )	7.33A	7.43A	7.53A	7.58A	7.65A
NMOT	45°C ± 2°C				

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

#### • Mechanical Characteristics

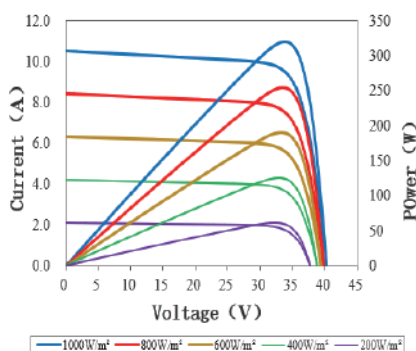
Solar Cells	Monocrystalline 158.75 × 158.75mm
No. of Cells	60 (6 × 10)
Dimensions	1665mm × 1002mm × 35mm
Weight	18.5kg
Front Glass	High transmission tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68
Cable	4mm <sup>2</sup> (IEC)
Connectors	Refer to the information Box below
Packaging Configuration	30pcs / box, 840pcs / 40'HQ Container

#### • Temperature Characteristics

Temperature Coefficient of P <sub>max</sub>	γ (P <sub>m</sub> )	-0.39%/K
Temperature Coefficient of V <sub>oc</sub>	β (V <sub>oc</sub> )	-0.29%/K
Temperature Coefficient of I <sub>sc</sub>	α (I <sub>sc</sub> )	0.049%/K

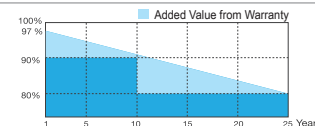
#### • I-V Curves

Current-Voltage & Power-Voltage Curve



#### • Warranty

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



#### • Information Box

Connectors:

- 1 PV-HT002-1 Max. Voltage =1500V Max. Current =30A; Manufacturer: Shanghai Aerospace Automobile Electromechanical Co.,Ltd.
- 2 PV-HT001-1 Max. Voltage=1500V Max. Current=30A; Manufacturer: Shanghai Aerospace Automobile Electromechanical Co., Ltd.
- 3 PV-KBT4/xy-UR PV-KST4/xy-UR Max. Voltage=1000V Max. Current=39A; Manufacturer: Multi-Contact AG Basel
- 4 PV-JM601 Max. Voltage =1000V Max. Current =30A; Manufacturer: Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.
- 5 PV-JM601A Max. Voltage =1000V Max. Current =30A; Manufacturer: Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.
- 6 PV-KST4/xy-UR;PV-KBT4/xy-UR Max. Voltage =1000V Max. Current =39A(4,0mm2); Manufacturer: Staubli Electrical Connectors AG
- 7 PV-KST4-EVO 2/XY\_UR (male); PV-KBT4-EVO 2/XY\_UR (female) Max. Voltage =1000V Max. Current =45A(4,0mm2); Manufacturer: Staubli Electrical Connectors AG
- 8 H4CF4DMS; H4CMC4DMS Max. Voltage =1000V Max. Current =35A; Manufacturer: Amphenol Technology (Shenzhen) Co.,Ltd.
- 9 UTXCFabcde; UTXCMabcde Max. Voltage =1000V Max. Current =35A; Manufacturer: Amphenol Technology (Shenzhen) Co.,Ltd.
- 10 TL-CABLE01S-F Max. Voltage =1000V Max. Current =30A; Manufacturer: Jiangsu Tonglin Electric Co., Ltd.
- 11 TL-CABLE01S-FR Max. Voltage =1000V Max. Current =30A; Manufacturer: Jiangsu Tonglin Electric Co., Ltd.
- 12 PV-JM608 Max. Voltage =1000V Max. Current =30A; Manufacturer: Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.
- 13 PV-JM608-1 Max. Voltage =1000V Max. Current =30A; Manufacturer: Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.
- 14 PV-JK03M-2 Max. Voltage=1500V Max. Current=30A; Manufacturer: Jiangxi Jinko PV Material Co., Ltd
- 15 PV-C002 Max. Voltage=1500V Max. Current=30A; Manufacturer:SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD