

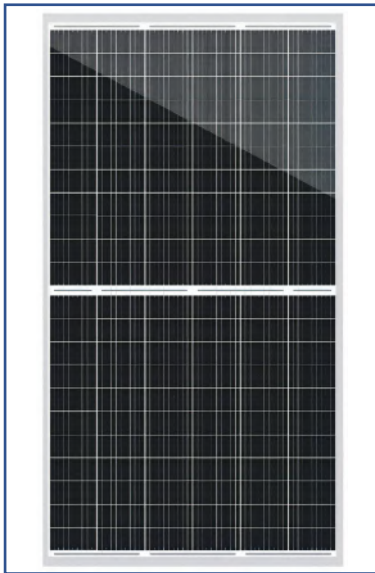
# HT60-18X(PD)-F

**NEW**

Large wafer

MULTIWAY+

**445W/450W**  
**455W/460W/465W**



- Module Efficiency: 21.4%
- No. of Cells 120(6×20)
- Weight 26.5kg
- Dimensions 1915mm×1134mm×30mm
- monocrystalline 182×91mm



Shanghai Aerospace Automobile Electromechanical Co., Ltd.  
Website: www.ht-saae.com  
E-mail: pvmarketing@ht-saae.com



Factory:  
Lianyungang Shenzhou New Energy CO., Ltd.  
Turkey HT Solar Energy Joint Stock Company



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



The optimized number and width of main gate lines, Maximize the light receiving area of components and Reduce component 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

**12Ys**

Products warranty

**30Ys**

Warranty on power output



2%

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

**EL**

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

**5W**

Positive tolerance 0/+5w guaranteed



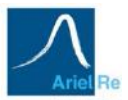
Entire module certified to with stand extreme wind(2400 Pa) and snow loads (5400 Pa)

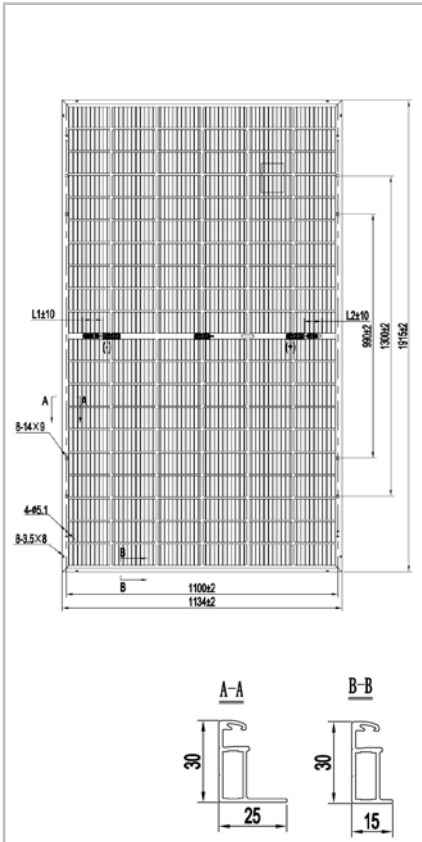
**Anti PID**

PID resistant

**Comprehensive and first-rate certification system**

IEC 61215:2016, IEC 61730:2016 Latest Standard ISO 9001, ISO 14001 and ISO 45001, meeting the highest international standards Strict quality control





### Electrical Characteristics (STC)

Module Type	HT60-18X(PD)-F				
Maximum Power(Pmax)	445W	450W	455W	460W	465W
Open Circuit Voltage(Voc)	41.18V	41.33V	41.48V	41.63V	41.78V
Short Circuit Current(Isc)	13.83A	13.90A	13.97A	14.04A	14.11A
Maximum Power Voltage(Vmp)	34.63V	34.78V	34.93V	35.08V	35.23V
Maximum Power Current(Imp)	12.86A	12.95A	13.04A	13.13A	13.22A
Module Efficiency	20.5%	20.7%	21.0%	21.2%	21.4%
Power Tolerance	0 ~ +5W				
Maximum System Voltage	1500V DC(IEC)				
Maximum Series Fuse Rating	25A				
Operating Temperature	-40°C to +85°C				

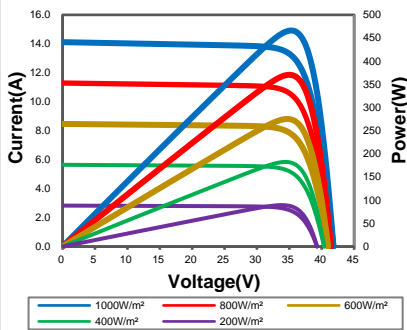
\* STC: AM 1.5, Irradiance 1000W/m<sup>2</sup>, module temperature 25°C

### Electrical Characteristics (NMOT)

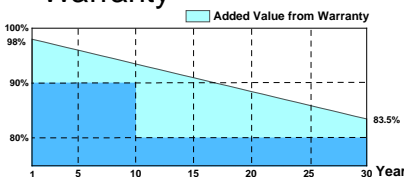
Module Type	HT60-18X(PD)-F				
Maximum Power(Pmax)	331W	335W	338W	342W	346W
Open Circuit Voltage(Voc)	39.03V	39.17V	39.31V	39.46V	39.60V
Short Circuit Current(Isc)	11.16A	11.22A	11.27A	11.33A	11.39A
Maximum Power Voltage(Vmp)	32.82V	32.96V	33.11V	33.25V	33.39V
Maximum Power Current(Imp)	10.09A	10.16A	10.21A	10.29A	10.36A

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

### IV Curves



### Warranty



12-year product warranty\*

30-year warranty on power output\*

\* Specific information is referred to the product quality guarantee

Temperature Coefficient of Pmax	$\gamma$ (Pm)	-0.33%/K
Temperature Coefficient of Voc	$\beta$ (Voc)	-0.26%/K
Temperature Coefficient of Isc	$\alpha$ (Isc)	0.042%/K
Solar Cells	Monocrystalline 182× 91mm	
No. of Cells	120 (6×20)	
Dimensions	1915mm×1134mm×30mm	
Weight	26.5kg	
Front Glass	High transmission tempered glass	
Frame	Anodized aluminum alloy	
Junction Box	IP68	
Cable	4mm <sup>2</sup> (IEC) Length: (+) 200mm, (-) 300mm	
Connectors	MC4 / MC4 Compatible	
Packaging Configuration	36 pcs/box: 864 pcs/ 40' HQ Container	

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

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