

# HT60-18X Transparent

High Efficiency Low LID Bifacial PERC with Half-cut Technology

NEW

Big Size: Cell 182\*91 Monocrystalline

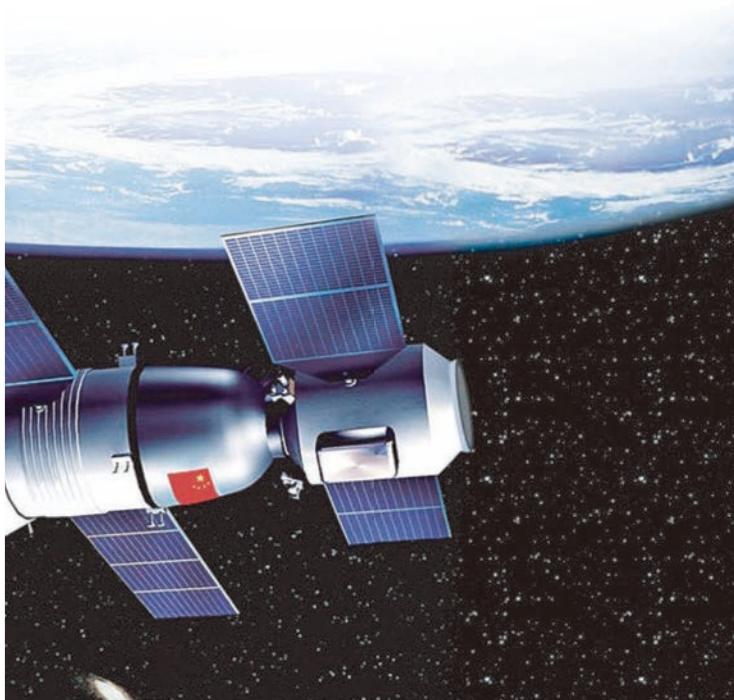
**440W / 445W**

**450W / 455W / 460W**



- Module Efficiency: 21.3%
- No. of Cells: 120 (6 × 20)
- Weight: 22.7kg
- Dimensions: 1908mm×1133mm×35mm

MULTIWAY+



Shanghai Aerospace Automobile Electromechanical Co., Ltd. website: [www.htsolar.com.tr](http://www.htsolar.com.tr)



Factory : Turkey HT Solar Energy Joint Stock Company Lianyungang ShenZhou New Energy Co., Ltd.



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



10BB The optimized number and width of main gate lines, Maximize the light receiving area of components and Reduce component power consumption

**12 Ys**

Products Warranty



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

**30 Ys**

Warranty on power output



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

**EL**

Microcrack resistant high performance transparent backsheet 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)

**PID**

PID Resistant

**Comprehensive and first-rate certification system**

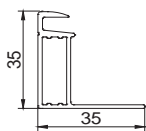
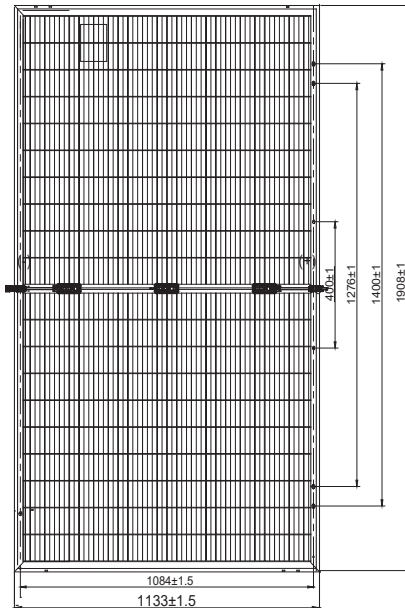
IEC61215: 2016. IEC61730: 2016 Latest Standard

and UL 61730 Latest Standard, ISO9001, ISO14001 and ISO45001, meeting the highest international standards Strict quality control



## 440W/445W/450W/455W/460W

### Engineering Drawing



### Electrical Characteristics

Module	HT60-18X				
Maximum Power at STC(Pmax)	440W	445W	450W	455W	460W
Open-Circuit Voltage(Voc)	41.03V	41.18V	41.33V	41.48V	41.63V
Short-Circuit Current(Isc)	13.76A	13.83A	13.90A	13.97A	14.04A
Optimum Operating Voltage (Vmp)	34.48V	34.63V	34.78V	34.93V	35.08V
Optimum Operating Current(Imp)	12.77A	12.86A	12.95A	13.04A	13.13A
Module Efficiency	20.4%	20.6%	20.8%	21.1%	21.3%
Power Tolerance	0 ~ +5W				
Maximum System Voltage	1500V DC(UL/IEC)				
Maximum Series Fuse Rating	25A				
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

### BIFACIAL REAR SIDE POWER GAIN

Electrical characteristics with different rear side power gain for reference (reference to 460W front)

Module		HT60-18X				Bifaciality: 70±5%	
Maximum Power	Pmax Gain	Voc/V	Isc/A	Vmp/V	Imp/A		
483W	5%	41.63	14.74	35.08	13.77		
506W	10%	41.63	15.44	35.08	14.42		
529W	15%	41.63	16.14	35.08	15.08		
552W	20%	41.63	16.85	35.08	15.73		
575W	25%	41.63	17.55	35.08	16.39		

\*bifacial gain:the additional gain from the rear side compared to the power of the front side at the standard test condition. It depends on mounting(structure,height,tilt angle etc.)and abledo of theground.

### NMOT

Module	HT60-18X				
Maximum Power	330W	334W	338W	342W	346W
Open Circuit Voltage (Voc)	37.60V	37.75V	37.90V	38.05V	38.20V
Short Circuit Current (Isc)	11.12A	11.20A	11.29A	11.37A	11.46A
Maximum Power Voltage (Vmp)	31.32V	31.47V	31.62V	31.77V	31.92V
Maximum Circuit Current (Imp)	10.54A	10.62A	10.69A	10.77A	10.84A
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 182 × 91 mm
No.of Cells	120 (6 × 20)
Dimensions	1908mm×1133mm×35mm
Weight	22.7kg
Front Glass	High transmission tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68
Cable	4mm <sup>2</sup> (UL/IEC) Length: (+) 400mm (-) 200mm/length can be customized
Connectors	MC <sub>4</sub> / MC <sub>4</sub> Compatible
Packaging Configuration	31pcs / box, 744pcs / 40'HQ Container

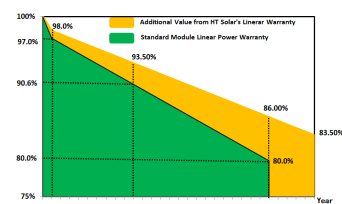
### Temperature Characteristics

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

### Warranty

- 12-year product warranty
- 30-year warranty on power output

Specific information is referred to the product quality guarantee



### I-V Curves

Current-Voltage & Power-Voltage Curve

