# **N-TOPCon**







HN18N-60H

470-495W

**MONOFACIAL** 

22.9%

High Efficiency Module

Maximum Efficiency



## Long-Term Reliability

Module certified to withstand mechanical test load +5400Pa /-2400Pa..

Excellent anti-PID performance to guarantee a better sustainability in harsh environment.



### **Lower Hot Spot and Crack Risk**

Reduce hot-spot risk with optimized electrical design and lower operating current.

Reduce crack risk by MBB solar cell design.



## **Higher Power Output**

Higher module conversion efficiency benefit from bigger wafer and half-cell structure.

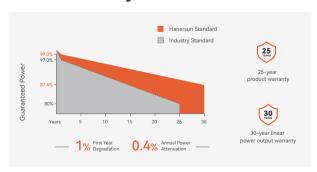
MBB technology enhances current collection with lower series resistance.



### **Excellent Temperature Coefficient**

Lower operating temperature and temperature coefficient increases the power output.

# **Power Warranty**



## Certificates



















Warranty partner



## **About Hanersun**

Hanersun is a world-leading clean energy company, focusing on R&D, manufacturing and distribution of solar module and energy storage system, as well as comprehensive clean energy solutions. Committed to high-efficiency technologies, the company is one of the first to launch PV modules of 600W+ and 700W+ in the industry.

### **Electrical Characteristics (STC)**

Module Type	HN18N-60H470W	HN18N-60H475W	HN18N-60H480W	HN18N-60H485W	HN18N-60H490W	HN18N-60H495W
Maximum Power (Pmax)*	470	475	480	485	490	495
Maximum Power Voltage (Vmp)	35.50	35.70	35.90	36.10	36.30	36.50
Maximum Power Current (Imp)	13.28	13.34	13.40	13.44	13.50	13.57
Open-circuit Voltage (Voc)*	42.40	42.60	42.80	43.00	43.20	43.40
Short-circuit Current (Isc)*	14.08	14.16	14.21	14.24	14.29	14.34
Module Efficiency(%)	21.7%	21.9%	22.2%	22.4%	22.6%	22.9%

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.

\*Measuring Tolerance: ±3% Power Binning Tolerance: 0~+5W

#### **Mechanical Parameters**

Solar Cells	N-TYPE Monocrystalline(182mm)	
No. of Cells	120 [2 x (10 x 6) ]	
Module Dimensions	1910*1134*30/35mm	
Weight	21.6kg	
Glass	3.2mm, Anti-reflection Coating, High Transmission, Low Iron, Tempered Glass	
Backsheet	White	
Frame	Anodized Aluminium Alloy	
J-Box	IP68	
Output Cable	4.0mm²	
Cable Length	Length Portrait:300/300mm (can be customized)	
Connector	Zerun Co.,Ltd / Z4S-abcd Stäubli Electrical connectors AG / PV-KST4-EVO2A/xy, PV-KBT4-EVO2A/xy	

### **Operating Parameters**

Operational Temperature	-40°C~+70°C	
Maximum System Voltage	1500V DC (IEC)	
Maximum Series Fuse Rating	25A	
Bifacility	/	
Fire Class Rating	Class C	

### **Temperature Ratings**

Temperature Coefficient of Pmax	-0.28%/°C
Temperature Coefficient of Voc	-0.23%/℃
Temperature Coefficient of Isc	+0.045%/°C

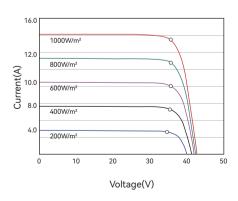
(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

#### **Packaging**

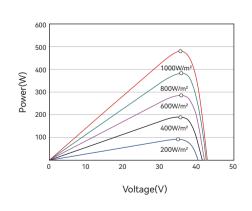
Pcs per Pallet: 37

Pcs per 40' HC: 888

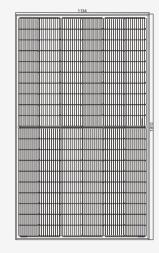
# I-V Curves of PV Module (480W)



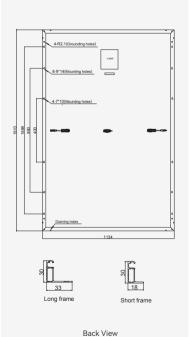
# P-V Curves of PV Module (480W)



#### Dimensions (Unit: mm)



Front View





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