N-TOPCon

HANERSL





HN18N-60H



MONOFACIAL

22.9%

High Efficiency Module

Maximum Efficiency



Long-Term Reliability

Module certified to withstand extreme wind (2400 Pascal) and snow loads (5400 Pascal).

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.

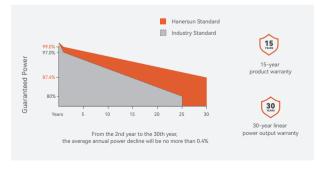
MBB technology enhances current collection with lower series resistance.



Excellent Temperature Coefficient

Lower operating temperature and temperature coefficient increases the power output.







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%

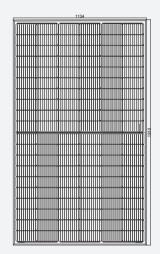
STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.

Mechanical Parameters

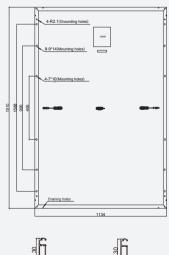
Solar Cells No. of Cells Module Dimensions	N-TYPE Monocrystalline(182mm) 120 [2 x (10 x 6)] 1910*1134*30mm	
Madula Dimonsions	1910*1134*30mm	
	1910*1134*30mm	
Weight	21.6kg	
Glass	3.2mm, Anti-reflection Coating, High Transmission, Low Iron, Tempered Glass	
Backsheet	White	
Frame	Anodized Aluminium Alloy	
J-Box	IP68	
Output Cable	4.0mm ²	
Cable Length	Length Portrait:300/300mm (can be customized)	
Connector	MC4-EVO 2A/Z4S-abcd/Others	

Dimensions (Unit: mm)

Power Tolerance: 0~+3%



Front View





Short frame

Back View

Operating Parameters

Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC (IEC)
Maximum Series Fuse Rating	25A
Bifacility	/
Fire Class Rating	Class C

Temperature Ratings

Pcs per 40' HC: 888

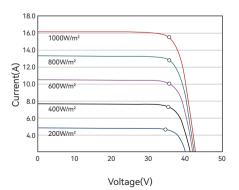
Temperature Coefficient of Pmax	-0.28%/°C
Temperature Coefficient of Voc	-0.23%/°C
Temperature Coefficient of lsc	+0.045%/°C

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

Packaging

Pcs per Pallet: 37

I-V Curves of PV Module (480W)



P-V Curves of PV Module (480W)

