# **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.

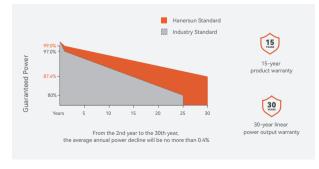
MBB technology enhances current collection with lower series resistance.



# **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**

**Operating Parameters** 

**Operational Temperature** 

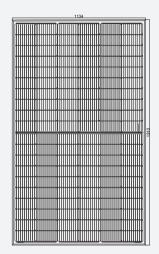
Maximum System Voltage

Maximum Series Fuse Rating

Solar Cells	N-TYPE Monocrystalline(182mm)		
No. of Cells	120 [2 x (10 x 6) ]		
Module Dimensions	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	4.0mm²		
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



Bifacility

Pcs per Pallet: 37

Fire Class Rating

#### **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)

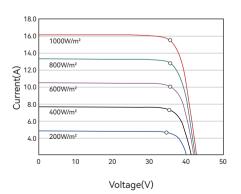
-40°C~+85°C 1500V DC (IEC)

25A

Class C

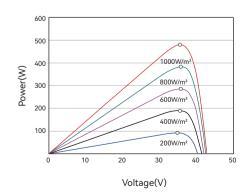
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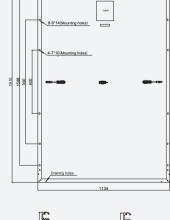
### I-V Curves of PV Module (480W)





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





4-R2.1(0



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Long frame

Back View

Tel: +86-25-52791766

Email: sales@hanersun.com

Website: www.hanersun.com

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