

## Hitouch 5N

HN18N-60H

470-490W

### TOPCon

High Efficiency Module

22.62%

Maximum Efficiency

25 YEARS

Product Warranty



#### 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



#### Long-Term Reliability

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

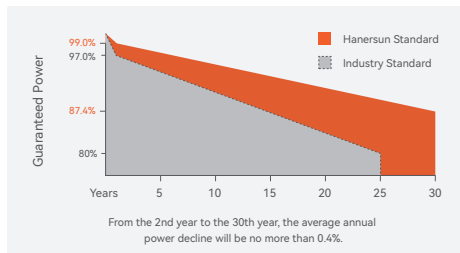


#### Lower Hot Spot and Crack Risk

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

Reduce crack risk by MBB solar cell design.

#### Power Warranty



25-year product warranty



30-year linear power output warranty

#### Insurance



Munich RE



太平洋保险  
CPIIC

#### Certificates



#### About Hanersun

Hanersun is a world leading solar module manufacturer and comprehensive energy solution provider. We provide customers with cutting edge solar modules, and services for the entire project life cycle.

## Electrical Characteristics

Module Type	HN18N-60H470W		HN18N-60H475W		HN18N-60H480W		HN18N-60H485W		HN18N-60H490W	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax)	470	357	475	363	480	365	485	369	490	373
Maximum Power Voltage (Vmp)	35.50	33.15	35.70	33.35	35.90	33.56	36.10	33.76	36.30	33.96
Maximum Power Current (Imp)	13.28	10.76	13.34	10.81	13.40	10.88	13.44	10.94	13.50	10.99
Open-circuit Voltage (Voc)	42.40	39.85	42.60	40.05	42.80	40.25	43.00	40.45	43.20	40.65
Short-circuit Current (Isc)	14.08	11.40	14.16	11.46	14.21	11.51	14.24	11.56	14.29	11.61
Module Efficiency(%)	21.70%		21.93%		22.16%		22.39%		22.62%	

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.  
\*Measuring tolerance: ±3%

NMOT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

## Mechanical Parameters

Solar Cells	Monocrystalline (182mm)
No. of Cells	120[2 x (10x 6) ]
Module Dimensions	1910*1134*30mm
Weight	24.0kg
Glass	3.2mm, High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA/POE
Backsheet	White
Frame	Anodized Aluminium Alloy
J-Box	IP68
Output Cable	4.0mm <sup>2</sup>
(Including Connector)	Length Portrait:1200/1200mm (can be customized)
Connector	Jiangsu Forward Electronic Technology Co.,Ltd 01C1 Stäubli Electrical connectors AG EVO2

## Temperature Ratings

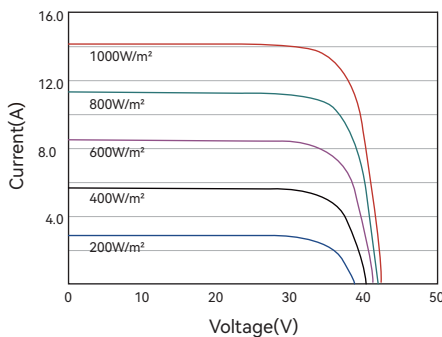
NMOT (Nominal operating cell temperature)	42°C(±2°C)
Temperature Coefficient of Pmax	-0.310%/°C
Temperature Coefficient of Voc	-0.260%/°C
Temperature Coefficient of Isc	+0.046%/°C

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

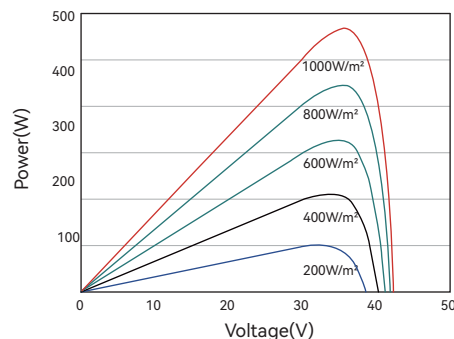
## Packaging

Pcs per Pallet:	36
Pcs per 40' HC:	864

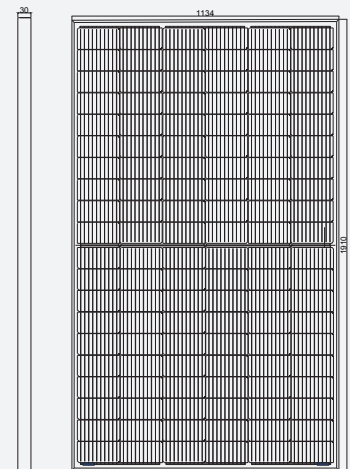
## I-V Curves of PV Module (470W)



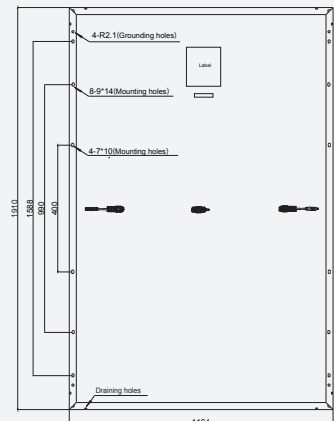
## P-V Curves of PV Module (470W)



## Dimensions (Unit: mm)



Front View



Long frame



Short frame

Back View