



Hitouch 5N

HN18RN-54HT

435-460W

BIFACIAL

Black Frame Module

23.0%

Maximum Efficiency



Long-Term Reliability

Module certified to withstand 5400 Pa positive static load and 2400 Pa negative static load.

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 optimization of solar cell design.



Higher Power Output

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

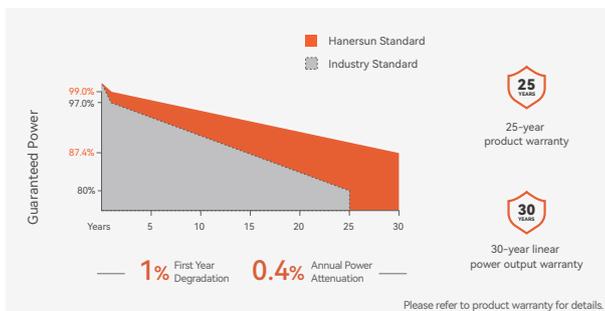
Better light trapping and current collection to improve module power output and reliability.



Excellent Temperature Coefficient

Lower operating temperature and temperature coefficient increases the power output.

Power Warranty



Certificates



Warranty partner



15Y Product / 30Y Linear Power Warranty under Munich Re insurance.

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	HN18RN-54HT435W	HN18RN-54HT440W	HN18RN-54HT445W	HN18RN-54HT450W	HN18RN-54HT455W	HN18RN-54HT460W
Maximum Power (Pmax)	435	440	445	450	455	460
Maximum Power Voltage (Vmp)	32.29	32.47	32.65	32.82	33.00	33.18
Maximum Power Current (Imp)	13.47	13.55	13.63	13.71	13.79	13.87
Open-circuit Voltage (Voc)	38.70	38.90	39.10	39.30	39.50	39.70
Short-circuit Current (Isc)	14.23	14.31	14.40	14.48	14.56	14.64
Module Efficiency(%)	21.8%	22.0%	22.3%	22.5%	22.8%	23.0%

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

Power Tolerance: 0~+3%

Electrical Characteristics (BNPI)

Module Type	435W	440W	445W	450W	455W	460W
Maximum Power (Pmax)	482	488	494	499	505	510
Maximum Power Voltage (Vmp)	32.29	32.47	32.65	32.82	33.00	33.18
Maximum Power Current (Imp)	14.93	15.03	15.14	15.21	15.31	15.38
Open-circuit Voltage (Voc)	38.70	38.90	39.10	39.30	39.50	39.70
Short-circuit Current (Isc)	15.77	15.86	15.96	16.04	16.13	16.22

BNPI: Irradiance: Front 1000W/m², Rear 135W/m², Cell Temperature 25°C, Air Mass AM1.5.

Mechanical Parameters

Solar Cells	N-TYPE Monocrystalline (188R)	No. of Cells	108 [2 x (9 x 6)]
Module Dimensions	1762*1134*30mm	Weight	24.4kg
Frame	Anodized Aluminium Alloy	J-Box	IP68
Front Glass	2.0 mm, AR Coating Heat Strengthened Glass	Connector	Z4S-abcd/MC4-EVO 2A/Others
Back Glass	2.0 mm, Heat Strengthened Glass	Cables	4.0mm ² , 300/300mm (can be customized)

Operating Parameters

Operational Temperature	-40°C~+70°C
Maximum System Voltage	1500V DC (IEC)
Maximum Series Fuse Rating	30A
Bifacial	80±5%
Fire Class Rating	Class C

Temperature Ratings

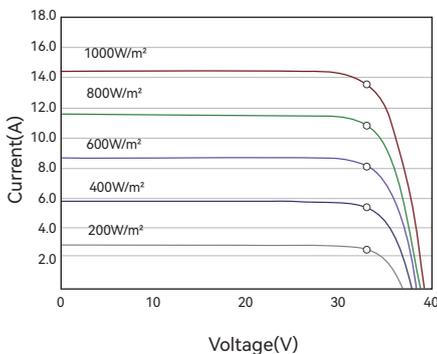
Temperature Coefficient of Pmax	-0.28%/°C
Temperature Coefficient of Voc	-0.23%/°C
Temperature Coefficient of Isc	+0.045%/°C

Packaging

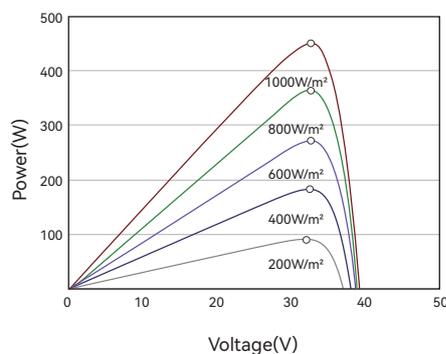
Pcs per Pallet: 37

Pcs per 40' HC: 962

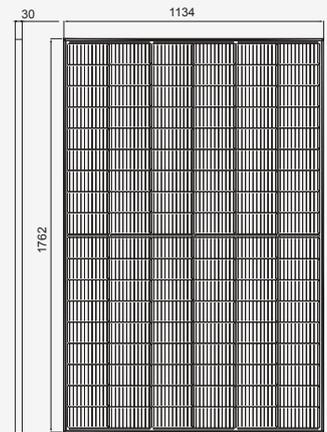
I-V Curves of PV Module (450W)



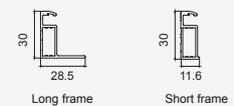
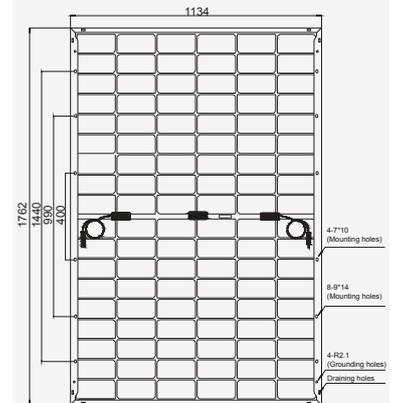
P-V Curves of PV Module (450W)



Dimensions (Unit: mm)



Front View



Back View