N-TOPCon

HANERSUN




# Hitouch 5N

## HN18N-54HT

# 425-445W

**BIFACIAL**
High Efficiency Module

**22.8%**
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.

### Higher Power Output

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

MBB technology enhances current collection with lower series resistance.

### Lower Hot Spot and Crack Risk

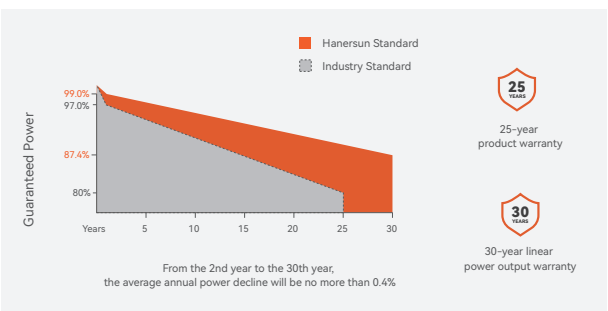
Reduce hot-spot risk with optimized electrical design and lower operating current.

Reduce crack risk by MBB solar cell design.

### Excellent Temperature Coefficient

Lower operating temperature and temperature coefficient increases the power output.

## Power Warranty




## Certificates

## Insurance

Munich RE

## About Hanersun

Hanersun is a world-leading clean energy company, with a business scope from the R&D and intelligent manufacturing of solar modules, energy storage products, to comprehensive energy solutions.

Made in China

## Electrical Characteristics (STC&BNPI) HN18N-54HTXXXW(XXX=425-445)

| Testing Condition | STC | BNPI | STC | BNPI | STC | BNPI | STC | BNPI | STC | BNPI |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Power (Pmax)* | 425 | 471 | 430 | 476 | 435 | 482 | 440 | 488 | 445 | 493 |
| Maximum Power Voltage (Vmp) | 32.10 | 32.10 | 32.30 | 32.30 | 32.50 | 32.50 | 32.70 | 32.70 | 32.90 | 32.90 |
| Maximum Power Current (Imp) | 13.24 | 14.68 | 13.32 | 14.74 | 13.39 | 14.84 | 13.46 | 14.93 | 13.53 | 14.99 |
| Open-circuit Voltage (Voc)* | 38.10 | 38.10 | 38.30 | 38.30 | 38.50 | 38.50 | 38.70 | 38.70 | 38.90 | 38.90 |
| Short-circuit Current (Isc)* | 14.05 | 15.57 | 14.12 | 15.64 | 14.19 | 15.72 | 14.26 | 15.80 | 14.33 | 15.88 |
| Module Efficiency(%) | 21.8% | | 22.0% | | 22.3% | | 22.5% | | 22.8% | |

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

BNPI: Irradiance: Front 1000W/m², Rear 135W/m², Cell Temperature 25℃, AM=1.5

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

## Electrical characteristics with different power bin (reference to 10% backside power gain)

| Module Type | 425W | 430W | 435W | 440W | 445W |
|---|---|---|---|---|---|
| Maximum Power (Pmax) | 468 | 473 | 479 | 484 | 490 |
| Maximum Power Voltage (Vmp) | 32.10 | 32.30 | 32.50 | 32.70 | 32.90 |
| Maximum Power Current (Imp) | 14.58 | 14.66 | 14.74 | 14.81 | 14.90 |
| Open-circuit Voltage (Voc) | 38.10 | 38.30 | 38.50 | 38.70 | 38.90 |
| Short-circuit Current (Isc) | 15.46 | 15.54 | 15.61 | 15.69 | 15.77 |

## Mechanical Parameters

| | | | |
|---|---|---|---|
| Solar Cells | N-TYPE Monocrystalline(182mm) | No. of Cells | 108 [2 x (9 x 6) ] |
| Module Dimensions | 1722*1134*30mm | Weight | 24.5kg |
| Glass | 2mm-2mm | J-Box | IP68 |
| Frame | Anodized Aluminium Alloy | Output Cable | 4.0mm², 1200/1200mm |
| Connector | Zerun Co.,Ltd / Z4S-abcd<br>Stäubli Electrical connectors AG / PV-KST4-EVO2A/xy, PV-KBT4-EVO2A/xy | | |

## Operating Parameters

| | |
|---|---|
| Operational Temperature | -40℃~+85℃ |
| Maximum System Voltage | 1500V DC (IEC) |
| Maximum Series Fuse Rating | 30A |
| Bifacility | ϕPmax=80±5% ϕIsc=80±5% ϕVoc=98±2% |
| Fire Class Rating | Class C |

## Temperature Ratings

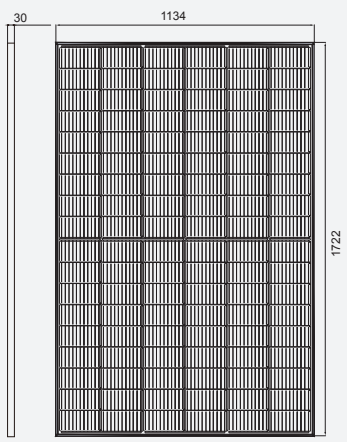
| | |
|---|---|
| Temperature Coefficient of Pmax | -0.28%/℃ |
| Temperature Coefficient of Voc | -0.23%/℃ |
| Temperature Coefficient of Isc | +0.045%/℃ |

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

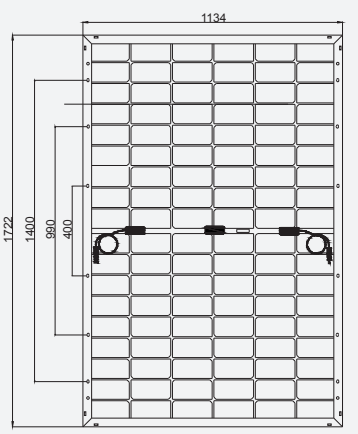
## Packaging

| | |
|---|---|
| Pcs per Pallet: 37 | Pcs per 40' HC: 962 |

## Dimensions (Unit: mm)

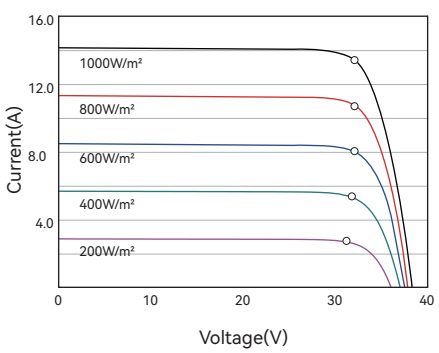



Front View

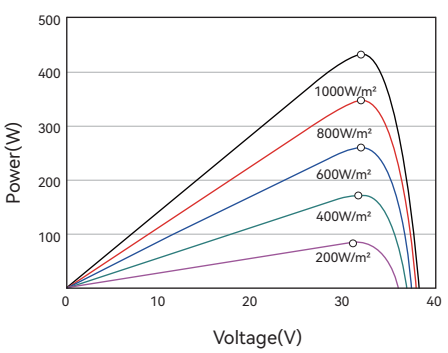



Back View

## I-V Curves of PV Module (430W)




## P-V Curves of PV Module (430W)





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