



## Hitouch<sup>5N</sup>

### HN18RN-54HT

## 430-455W

### BIFACIAL

Full Black 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.



#### 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.

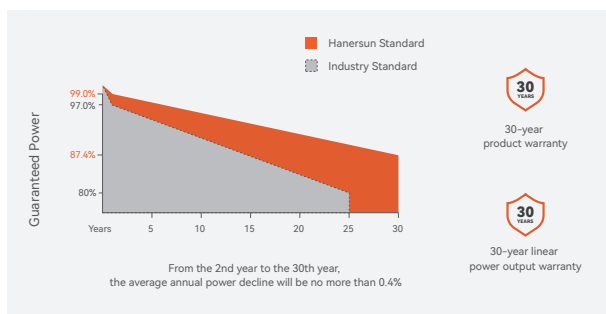
MBB technology enhances current collection with lower series resistance.



#### Excellent Temperature Coefficient

Lower operating temperature and temperature coefficient increases the power output.

### Power Warranty



### Certificates



Warranty partner

Munich RE 

### 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.

\*This version datasheet applies to Varus Energy GmbH only.

## Electrical Characteristics (STC)

| Module Type                 | HN18RN-54HT430W | HN18RN-54HT435W | HN18RN-54HT440W | HN18RN-54HT445W | HN18RN-54HT450W | HN18RN-54HT455W |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Maximum Power (Pmax)        | 430             | 435             | 440             | 445             | 450             | 455             |
| Maximum Power Voltage (Vmp) | 32.12           | 32.29           | 32.47           | 32.65           | 32.82           | 33.00           |
| Maximum Power Current (Imp) | 13.39           | 13.47           | 13.55           | 13.63           | 13.71           | 13.79           |
| Open-circuit Voltage (Voc)  | 38.50           | 38.70           | 38.90           | 39.10           | 39.30           | 39.50           |
| Short-circuit Current (Isc) | 14.14           | 14.23           | 14.31           | 14.40           | 14.48           | 14.56           |
| Module Efficiency(%)        | 21.5%           | 21.8%           | 22.0%           | 22.3%           | 22.5%           | 22.8%           |

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.

Power Tolerance: 0~+3%

## Electrical Characteristics (BNPI)

| Module Type                 | 430W  | 435W  | 440W  | 445W  | 450W  | 455W  |
|-----------------------------|-------|-------|-------|-------|-------|-------|
| Maximum Power (Pmax)        | 477   | 482   | 488   | 494   | 499   | 505   |
| Maximum Power Voltage (Vmp) | 32.12 | 32.29 | 32.47 | 32.65 | 32.82 | 33.00 |
| Maximum Power Current (Imp) | 14.86 | 14.93 | 15.03 | 15.14 | 15.21 | 15.31 |
| Open-circuit Voltage (Voc)  | 38.50 | 38.70 | 38.90 | 39.10 | 39.30 | 39.50 |
| Short-circuit Current (Isc) | 15.67 | 15.77 | 15.86 | 15.96 | 16.04 | 16.13 |

BNPI: Irradiance: Front 1000W/m<sup>2</sup>, Rear 135W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.

## Mechanical Parameters

|                   |                               |
|-------------------|-------------------------------|
| Solar Cells       | N-TYPE Monocrystalline (188R) |
| Module Dimensions | 1762*1134*30mm                |
| Glass             | 2mm-2mm                       |
| Frame             | Anodized Aluminium Alloy      |
| Output Cable      | 4.0mm <sup>2</sup>            |

|              |                            |
|--------------|----------------------------|
| No. of Cells | 108 [2 x (9 x 6) ]         |
| Weight       | 24.1kg                     |
| J-Box        | IP68                       |
| Connector    | MC4-EVO 2A/Z4S-abcd/Others |
| Cable Length | 1200mm cable               |

## Operating Parameters

|                            |                |
|----------------------------|----------------|
| Operational Temperature    | -40°C~+85°C    |
| Maximum System Voltage     | 1500V DC (IEC) |
| Maximum Series Fuse Rating | 30A            |
| Bifacility                 | 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 |

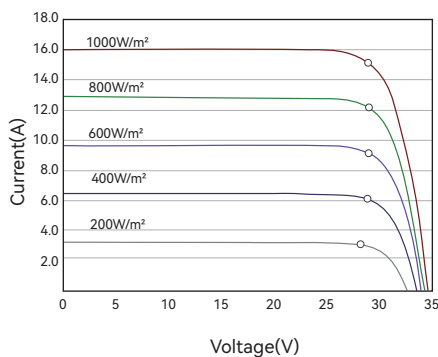
(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

## Packaging

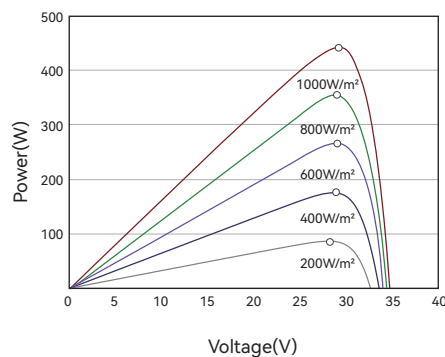
|                    |
|--------------------|
| Pcs per Pallet: 37 |
|--------------------|

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

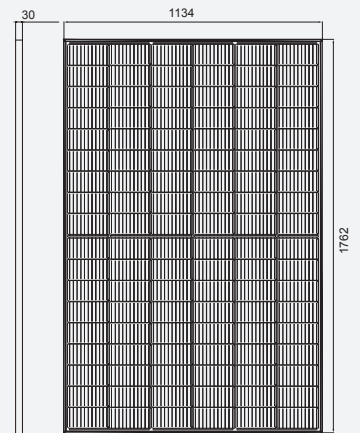
## I-V Curves of PV Module (440W)



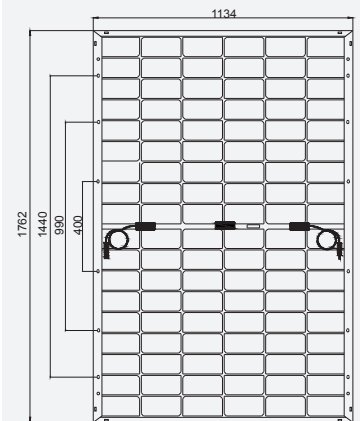
## P-V Curves of PV Module (440W)



## Dimensions (Unit: mm)



Front View



Long frame



Short frame

Back View