



## Hitouch 6N

HN21RN-48H

# 430-455W

**MONOFACIAL**

High Efficiency Module

**22.8%**

Maximum Efficiency



### Long-Term Reliability

Module certified to withstand mechanical test load +5400Pa / -2400Pa.

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.

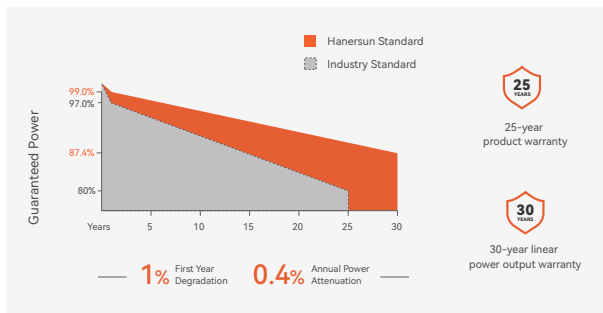
Reduce crack risk by MBB solar cell design.



### Excellent Temperature Coefficient

Lower operating temperature and temperature coefficient increases the power output.

## Power Warranty



## Certificates



Warranty partner



## 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	HN21RN-48H430W	HN21RN-48H435W	HN21RN-48H440W	HN21RN-48H445W	HN21RN-48H450W	HN21RN-48H455W
Maximum Power (Pmax)*	430	435	440	445	450	455
Maximum Power Voltage (Vmp)	29.14	29.30	29.46	29.62	29.78	29.94
Maximum Power Current (Imp)	14.76	14.85	14.94	15.03	15.12	15.20
Open-circuit Voltage (Voc)*	34.93	35.13	35.33	35.53	35.73	35.93
Short-circuit Current (Isc)*	15.76	15.82	15.88	15.94	16.00	16.06
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.

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

## Mechanical Parameters

Solar Cells	N-TYPE Monocrystalline(210R)
No. of Cells	96 [2 x (8 x 6) ]
Module Dimensions	1762*1134*30/35mm
Weight	21.0kg
Glass	3.2mm, Anti-reflection Coating, High Transmission, Low Iron, Tempered Glass
Backsheet	White
Frame	Anodized Aluminium Alloy
J-Box	IP68
Output Cable	4.0mm <sup>2</sup>
Cable Length	Length Portrait:300/300mm (can be customized)
Connector	Zerun Co.,Ltd / Z4S-abcd Stäubli Electrical connectors AG / PV-KST4-EVO2A/xy, PV-KBT4-EVO2A/xy

## Operating Parameters

Operational Temperature	-40°C~+70°C
Maximum System Voltage	1500V DC (IEC)
Maximum Series Fuse Rating	30A
Bifacility	/
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

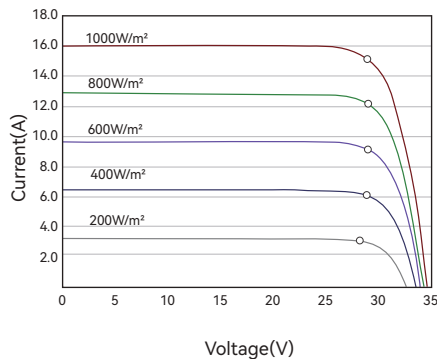
(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

## Packaging

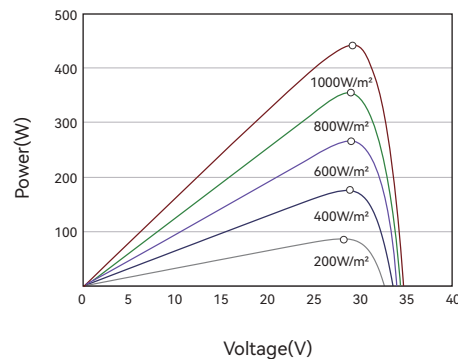
Pcs per Pallet: 37

Pcs per 40' HC: 962

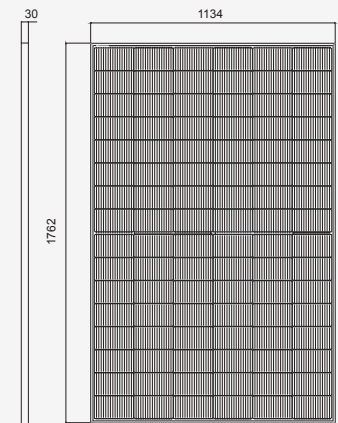
## I-V Curves of PV Module (440W)



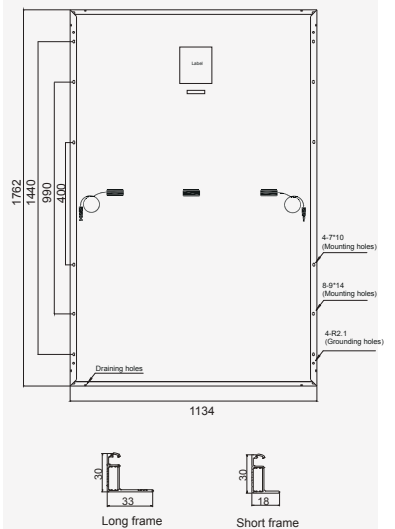
## P-V Curves of PV Module (440W)



## Dimensions (Unit: mm)



Front View



Back View