

# Kunlun G12R Series **Ultra-high bifaciality** **480-500W**

**108-cell** vertical installation  
frameless HJT module

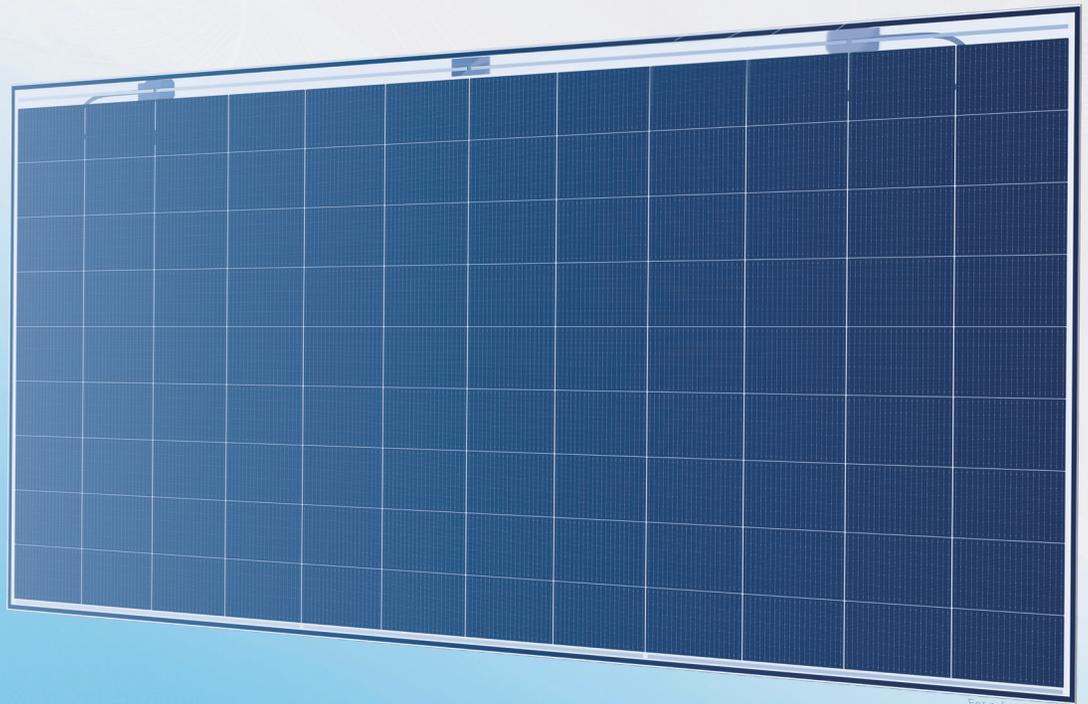
**HJT 3.0** HJT-0BB Technology  
Shorter current transport path, better low-light performance and higher power generation.

**Ultra-high bifacial rate**  
Nearly 100% bifacial rate.

**Unique product design**  
Special patented circuit design makes system installation more convenient.

**Preferred for vertical installation scenario**  
Extremely small projection area, suitable for agricultural and transportation scenarios.

**Ultra-low operation and maintenance costs**  
Vertical installation ensures no snow or dust accumulation, significantly reducing operation and maintenance costs.

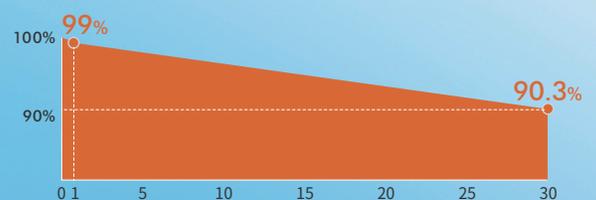


For reference only



**Complete System and Product Certifications:**

- IEC61215, IEC61730
- ISO9001:2015 Quality Management System
- ISO14001:2015 Environment Management System
- ISO45001:2018 Occupational Health and Safety
- IEC62941:2019 Terrestrial photovoltaic (PV) modules- Quality system for PV module manufacturing
- IEC/TS62994: 2019 Photovoltaic (PV) Modules Through the Life Cycle-environmental Health and Safety (EH&S) Risk Assessment-general Principles and Nomenclature



\* First year power degradation  $\leq 1\%$   
\* Annual power degradation (2-30 year)  $\leq 0.3\%$   
\* Power output until the 30th year  $> 90.3\%$

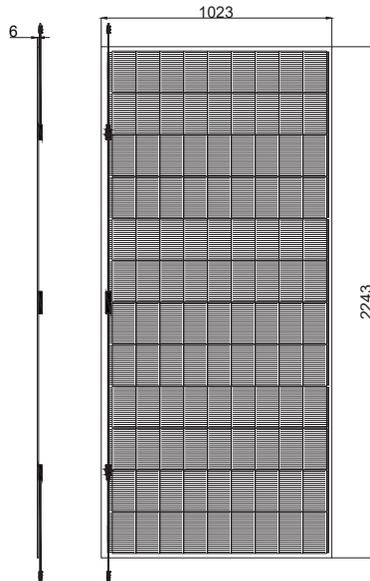
# HSN-210R-B108 480-500W

108-Half-Cell-vertical installation frameless HJT module

- BloombergNEF Tier 1 PV module manufacturer
- Reinsurance underwritten by Ariel Re

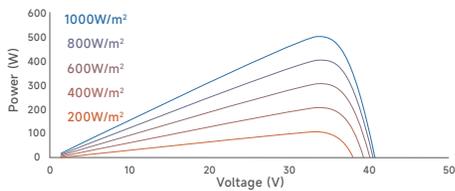
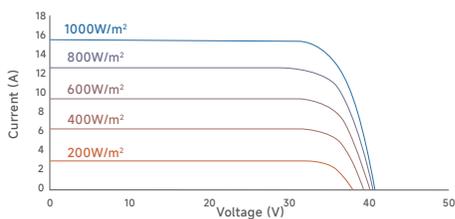
## Engineering Drawings

Unit: mm



## I-V Curve

(HSN-210R-B108DNV500)



## Temperature Characteristics

Temperature Coefficient of Pmax	-0.24%/°C
Temperature Coefficient of Voc	-0.22%/°C
Temperature Coefficient of Isc	+0.04%/°C

## Operating Conditions

Nominal Operating Cell Temp.	44±2°C
Operating Temperature	-40~+85°C
Maximum System Voltage	DC1500V (IEC)
Maximum Series Fuse Rating	30A
Tolerance of Pmax	0~+3%
Power Selection	0~+5W
Bifaciality	97±3%
Safety Class	Class II

## Mechanical Characteristics

Cell Type	HJT
No. of Cells	108 (9x12)
Dimensions	2243 x 1023 x 6 mm
Weight	30.5kg
Junction Box	IP68
Cable	4mm²; +450/-500mm or customized; UV resistant
Connector	PV-H1 / MC4-Evo 2 / Others
Max Static Load (front side/rear side)	2800Pa / 2800Pa
Glass	Dual glass, 2.5mm

## Electrical Characteristics

### STC

HSN-210R-B108	DNV480	DNV485	DNV490	DNV490	DNV495	DNV500
Maximum Power (Pmax/W)	480	485	490	490	495	500
Module Efficiency (%)	20.9	21.1	21.4	21.4	21.6	21.8
Voltage at Pmax (Vmp/V)	33.72	33.83	33.94	33.94	34.05	34.16
Current at Pmax (Imp/A)	14.24	14.34	14.44	14.44	14.54	14.64
Open Circuit Voltage (Voc/V)	40.32	40.43	40.54	40.54	40.65	40.76
Short Circuit Current (Isc/A)	15.04	15.15	15.26	15.26	15.37	15.48

STC: AM1.5, 1000W/m², 25°C.

### BNPI

Maximum Power (Pmax/W)	541	547	552	552	558	564
Voltage at Pmax (Vmp/V)	34.84	33.95	34.06	34.06	34.17	34.28
Current at Pmax (Imp/A)	16.00	16.12	16.23	16.23	16.35	16.46
Open Circuit Voltage (Voc/V)	40.46	40.57	40.68	40.68	40.79	40.90
Short Circuit Current (Isc/A)	16.97	17.09	17.22	17.22	17.34	17.47

BNPI: AM1.5, 1000W/m², 135W/m², 25°C.

### NOCT

Maximum Power (Pmax/W)	366	370	374	374	377	381
Voltage at Pmax (Vmp/V)	32.20	32.31	32.42	32.42	32.53	32.63
Current at Pmax (Imp/A)	11.38	11.46	11.54	11.54	11.62	11.70
Open Circuit Voltage (Voc/V)	38.48	38.59	38.69	38.69	38.80	38.90
Short Circuit Current (Isc/A)	12.02	12.11	12.20	12.20	12.28	12.37

NOCT: AM1.5, 800W/m², 20°C, 1m/s.

## Packaging

	40'HQ
Modules Per Pallet	33
Pallets Per Container	20
Modules Per Container	660



ANHUI HUASUN ENERGY CO., LTD. All rights reserved © 2020-2025

NO.99 Qingliu Road, Economic and Technological Development Zone, Xuancheng, Anhui, China  
 Tel: 0086-563-3318095 www.huasunsolar.com  
 sales@huasunsolar.com customerservice@huasunsolar.com

With the development of technology and the iterative updating of products, the technical specification of products released by HUASUN in the future may differ from those listed in this datasheet. HUASUN reserves the right to change the technical specification of the products at any time without prior notice, and the technical specification of the products ordered by the customers are subject to the technical specification agreed upon in the legally binding contract signed by both parties. The final interpretation of the datasheet is reserved by HUASUN.

2.0\_20250814