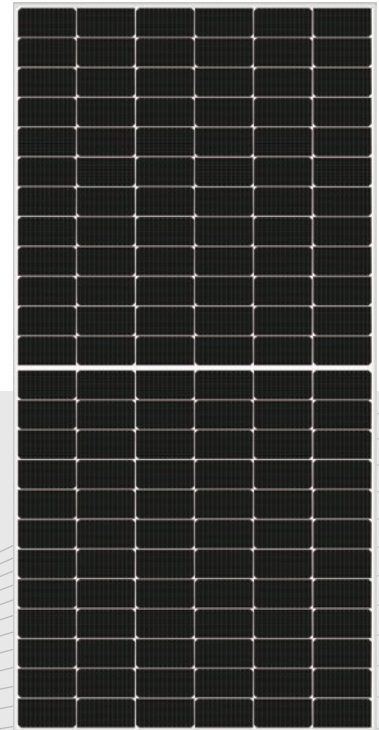




**HUASUN**

**Bright Your Sustainable Future**

# HS-B144DS SERIES



450W | 455W | 460W | 465W | 470W

144-cell | Bifacial HJT Mono Half Cell PV-Module Series

## WARRANTY

**15**  
years

Product  
Warranty

**30**  
years

Linear Power  
Warranty

## CERTIFICATES



## QUALITY BENEFITS

21.62  
%

### Extreme Power Production

The module efficiency up to 21.62% achieved by utilizing the most advanced technology in the solar industry.



### SuperMBB Half-Cut Cell Technology

Using the advanced 12BB solar cell combines with half-cut cell technology to guarantee more power.



### Advanced Bifacial Efficiency

Bifaciality >92%, effectively improves backside power generation.

A bifacial cell design that generates energy from both sides, capturing and converting more sunlight into power even with a backsheet.



Weak light

### High Energy Yield

Excellent weak light performance and better performance in hot climate. Leading temperature coefficient for more production when the sun shines strongest, Or under the cloudy, haze condition.

5,400  
2,400  
Pascal

### Guaranteed Better Durability

Certified for snow and wind loads of a maximum of 5,400 / 2,400 Pascals and with better protection against harsh weather to improve cell life for long-lasting high power.

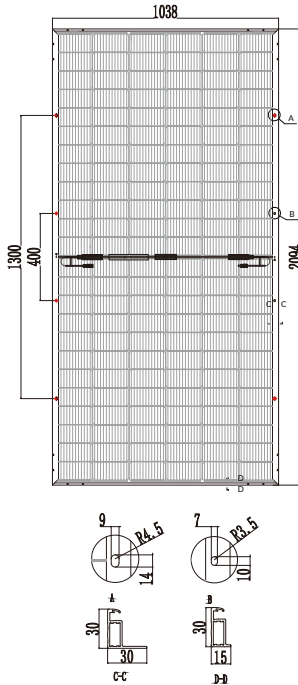


### Industry Leading Output Warranty

Huasun solar cell technology result in extremely low LID and PID which supports reliability and longevity. 12% power degradation in 30 years.

The Specification and key features described in this datasheet may deviate slightly and are not guaranteed. Reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.

## Engineering Drawings



## Temperature Characteristics

Nominal Operating Cell Temp. (NOCT)	44 C (±2 C)
Temperature Coefficient of Pmax	-0.26 %/C
Temperature Coefficient of Voc	-0.24 %/C
Temperature Coefficient of Isc	0.04 %/C

## Shipping Configurations

	HC	GP
Container Length	40'	20'
Pallets Per Container	22	10
Modules Per Pallet	35pcs	35pcs
Modules Per Container	770pcs	350pcs

## Certifications & Warranty

Safety	IEC61215, IEC61730
Fire Rating	Class A
Product Warranty	15 Yrs Workmanship
Performance Warranty of Pmax	30 Yrs Power Output (Linear)*

\* 1st year 99%, after 2nd year 0.37% annual degradation to year 30.

## Electrical Characteristics (STC)

Model Number	HS-B144 DS450	HS-B144 DS455	HS-B144 DS460	HS-B144 DS465	HS-B144 DS470
Maximum Power (Pmax)	450W	455W	460W	465W	470W
Max Module Efficiency(%)	20.70%	20.93%	21.16%	21.39%	21.62%
Voltage at Max Power (Vmp)	44.85V	45.04V	45.24V	45.44V	45.66V
Current at Max Power (Imp)	10.05A	10.12A	10.18A	10.24A	10.30A
Open Circuit Voltage (Voc)	52.96V	53.09V	53.22V	53.35V	53.48V
Short Circuit Voltage (Isc)	10.46A	10.52A	10.58A	10.64A	10.70A
Operating Module Temperature	-40 to +85 C				
Maximum System Voltage	DC1500V (IEC)				
Maximum Series Fuse	25A				
Rating Power Sorting	0~+5W				
Bifaciality (%)	80 (0~+5)				

\*STC: Irradiance 1000 W/m<sup>2</sup>, module temperature 25 C, AM=1.5; Best in Class AAA solar simulator used, power measurement uncertainty is within +/- 3%.

## NOCT

	450W	455W	460W	465W	470W
Max. Power at NOCT (Pmax)	336W	340W	343W	348W	351W
Voltage Max. Power (Vmp)	41.61V	41.75V	41.83V	41.99V	42.12V
Current Max Power (Imp)	8.09A	8.15A	8.21A	8.29A	8.34A
Open Circuit Voltage (Voc)*	49.89V	49.21V	49.45V	49.71V	49.91V
Short Circuit Voltage (Isc)*	8.46A	8.49A	8.52A	8.57A	8.59A

\*NOCT: 800W/m<sup>2</sup> Irradiance, 20 C ambient temperature, AM=1.5, wind speed 1m/s. Values are based on RETC certified results from a light-soaked module.

## Mechanical Characteristics

Laminate Structure	Glass/ POE/ Cells/ POE/Glass
Cell Type	HJT Mono 166 x 83 mm
Cell Connection	144 (72x2)
Module Dimensions	2094 x 1038 x30 mm
Weight	26.5 kg
Junction Box	Degree of protection IP67
Output Cable	4mm <sup>2</sup> , 200mm in length, length can be customized
Connectors Type	UV Resistant Cable/Compatible MC4
Frame	Anodised Aluminum Alloy
Encapsulant	POE
Front Load*	5400 Pa
Real Load*	2400 Pa
Glass Thickness	(F) 2.0mm Anti-reflective surface Solar glass   (B) 2.0mm Solar glass

\* Mechanical load test report per Solar PTL (IEC 61730)