

# N<sup>+</sup>SERIES

## SUN182THCDXXX-60(X=490~500)

**490~500W**    **22.65%~23.11%**    **0~+5W**    **≤1%**    **≤0.4%**  
 MAXIMUM POWER OUTPUT    MAX MODULE EFFICIENCY    POWER TOLERANCE    POWER DEGRADATION FIRST YEAR    POWER DEGRADATION YEAR 2~30

### BIFACIAL MODULE

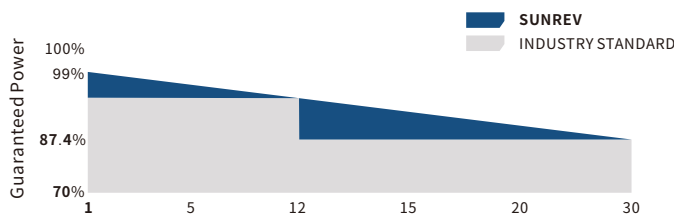
#### N-Type

IEC 61215(2021), IEC 61730(2023)

ISO 9001:2015: Quality management system

ISO 14001:2015: Environment System

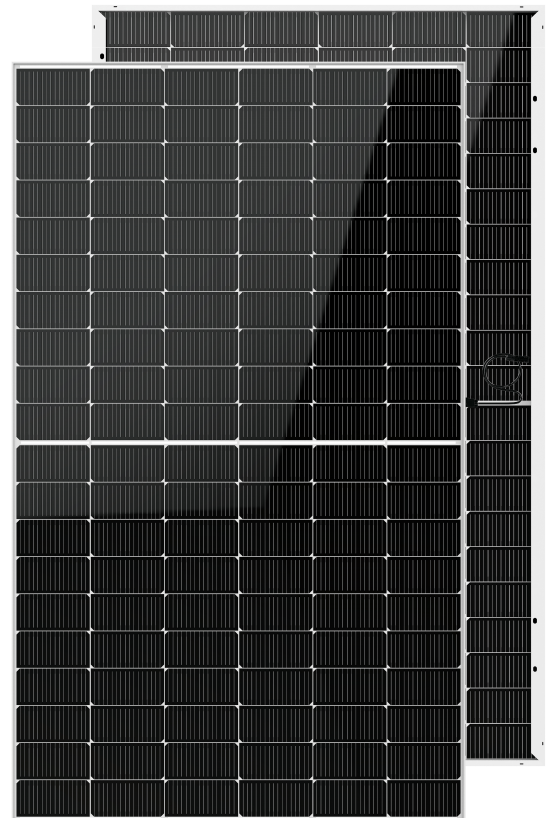
ISO 45001:2018: Occupational health management systems



**12-Year** Warranty for Materials and Processing

**30-Year** Warranty for Extra Linear Power Output

**0.40%** Annual Degradation Over 30 years



## PRODUCT FEATURES



**SMBB Technology Half Cut N-Type Cell**  
Better light trapping and current collection to improve module power output and reliability.



**Higher Power Output**  
Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR.



**PID Resistance**  
Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



#### Higher reliability

The N-type has a single-watt power generation gain of over 3% compared to PERC modules, reduces power temperature loss, and exhibits excellent high-temperature performance. Low electricity cost



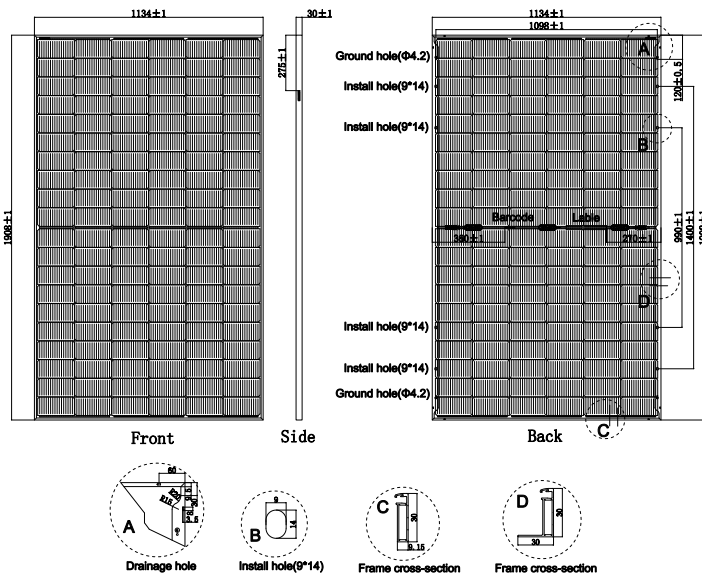
#### Enhanced Mechanical Load

Test load 5400Pa(downward) and 2400 Pa(upward).

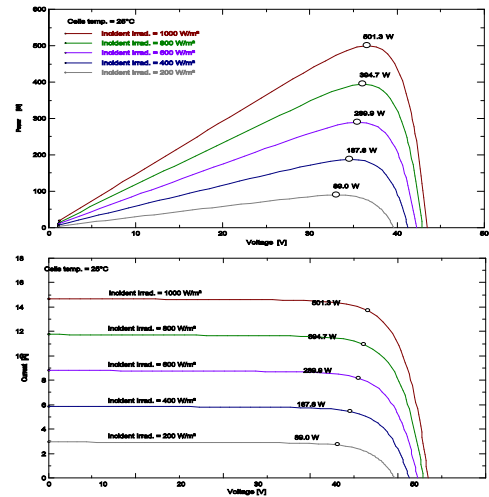


Made in China

## Drawing Information



## I-V Curve(500W)



## Connector Model

- 1: Zerun Co., Ltd. Z4S-abcd
- 2: Zhejiang Minghe New Energy Technology Co., Ltd. PV-MH5
- 3: Zhejiang Chint XinHui PV Co., Ltd. PV-HCC40

## Packaging Configuration

Per Pallet	36Pcs	
Container	20GP	40HQ
Pcs/Container	216	864

## Mechanical Parameters

Cell Type	N type Mono-crystalline
No. of cells	120(6*20)
Dimensions	1908*1134*30mm
Weight	28.0kg
Front Glass	2.0mm, Anti-Reflection Coating
Back Glass	2.0mm, Heat Strengthened Glass
Frame	Anodized Aluminum Alloy Frame
Junction Box	IP68 Rated / 3 Diodes
Output Cables	4.0mm²/+300mm-300mm, or Customized length
Fire Safety Class	Class C according to UL790

## ELECTRICAL PARAMETERS

Module Type	SUN182THCD490-60			SUN182THCD495-60			SUN182THCD500-60		
	STC	BNPI	aBSI	STC	BNPI	aBSI	STC	BNPI	aBSI
Maximun Power(Pmax/W)	490	543		495	548		500	554	
Maximun Power Voltage(Vmp/V)	35.72	35.72		35.87	35.87		36.03	36.03	
Maximun Power Current(Imp/A)	13.73	15.21		13.80	15.28		13.88	15.38	
Open-circuit Voltage(Voc/V)	43.13	43.13		43.28	43.28		43.43	43.43	
Shot-circuit Current(Isc/A)	14.53	16.10	18.02	14.61	16.19	18.12	14.69	16.28	18.22
Module Efficiency(%)	22.65			22.88			23.11		
Module [T <sub>95</sub> ] <sub>max</sub>				70°C					
Maximun system voltage				1500VDC					
Maximun series fuse rating				30A					
Tolerance of Pmax/Voc/Isc				±3%					
Temperature coefficients of Pmax				-0.290%/°C					
Temperature coefficients of Voc				-0.250%/°C					
Temperature coefficients of Isc				0.040%/°C					
Bifaciality Coefficient				φVoc=100±5% φIsc=80±5% φPmax=80±5%					

- \*STC:** ☀ Irradiance 1000W/m² 🌡 Cell temperatura 25°C ☁ AM=1.5
- \*BNPI:** ☀ Irradiance front 1000W/m² rear 135W/m² 🌡 Cell temperatura 25°C ☁ AM=1.5
- \*aBSI:** ☀ Irradiance front 1000W/m², rear 300W/m² 🌡 Cell temperatura 25°C ☁ AM=1.5

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