

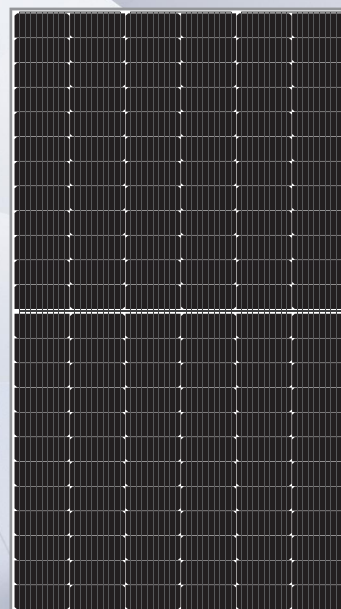
# Mono Half Cut

**Monofacial**  
**440~460W**

SN(440~460)-144M

9BB

Mono MBB perc large size half cut module



## KEY FEATURES



### M6 wafer MBB half cut technology

Large-size cells increase the effective generation area, less current transfer distance & resistance, improve generation efficiency



### High efficiency cells & high module yield guarantee

Adopt latest A grade high efficiency MBB cells, increase power generation & the rate of return on investment



### Special cells strings array layout

Effectively reduce the working temperature & current, improve low-light generation and shadow performance



### Optimized module size & weight

Excellent industry size compatibility, suitable for ultra power plant & commercial projects, effectively reducing LCOE & transportation costs



### Stable generation capacity and power loss guarantee

0~+5W power output guarantee, 1st year power degradation  $\leq 2\%$ , 2nd year to 25th year power degradation  $\leq 0.6\%$



### Excellent environmental adaptability and anti-aging ability

Excellent anti-PID, sand-dust, salt-mist & ammonia resistance ability; 2400Pa wind load & 5400Pa snow load approved

## CERTIFICATION

IEC61215 | IEC61730 | IEC 61701 | CE | INMETRO  
ISO 9001

2015 Quality Management System

ISO 14001

2015 Environmental Management System

ISO45001

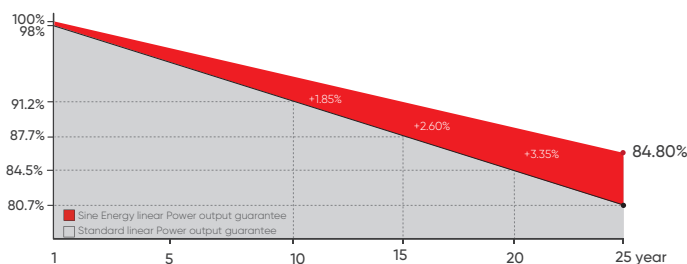
2018 Occupational Health and Safety Management System



## INDUSTRY LEADING WARRANTY

**12 years** Guarantee on product material and workmanship

**25 years** Linear power output warranty



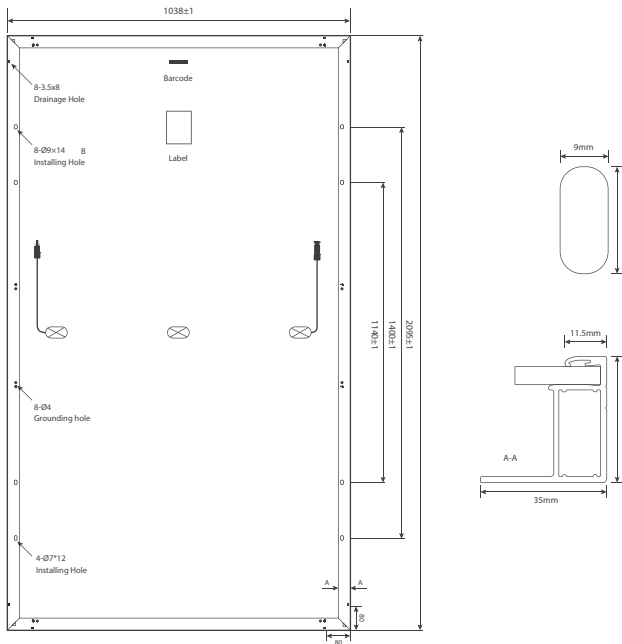
# SN(440~460W)-144M

Weight  
**23.5kg**

Number of Cells  
**144pcs(24×6)**

Module Size  
**2095×1038×35mm**

Packing  
**31pcs/pallet, 682pcs/40HQ**



## MECHANICAL SPECIFICATIONS

Solar Cell Type	166×63mm
Glass	3.2mm tempered, high transmission ART coating
Back Sheet	White KPF
Frame	Silver Anodized Aluminium Alloy
Junction Box	IP68
No. of Diodes	3pcs
Output Cable	4.0mm <sup>2</sup> 400/400mm (custmized available)
Connector	MC4 Compatible (MC4 Original optional)
Wind/Snow Load	2400pa/5400pa

## TEMPERATURE COEFFICIENT

Nominal Operating Cell Temp(NOCT)	44±2 C
Temperature Coefficient of ISC	0.060% C
Temperature Coefficient of VOC	-0.30% C
Temperature Coefficient of Pmax	-0.39% C
Operational Temperature	-40~85 C
Maximum System Voltage	1500V DC(IEC)
Maximum Series Fuse Rating	25A

## ELECTRICAL SPECIFICATION (STC)

	<b>440W</b>	<b>445W</b>	<b>450W</b>	<b>455W</b>	<b>460W</b>
Maximum Power -Pmax(W)	440W	445W	450W	455W	460W
Maximum Power Voltage-Vmp(V)	41.40V	41.75V	42.10V	42.41V	42.76V
Maximum Power Current-Imp(A)	10.63A	10.66A	10.69A	10.73A	10.76A
Open Circuit Voltage -Voc(V)	49.25V	49.55V	49.84V	50.10V	50.38V
Short Circuit Current-Isc(A)	11.28A	11.31A	11.34A	11.37A	11.40A
Module Efficiency(STC) -ηm(%)	20.23%	20.46%	20.69%	20.92%	21.15%
Power output tolerance(W)	0~+5W				

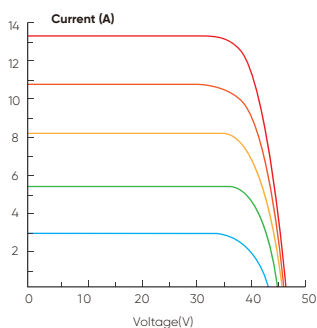
STC:Irradiance:1000W/m<sup>2</sup>, Module Temperature:25°C,Air Mass:1.5

## Electrical Specification (NOCT)

	<b>321W</b>	<b>324.8W</b>	<b>328.5W</b>	<b>332.5W</b>	<b>336.2W</b>
Maximum Power -Pmax(W)	321W	324.8W	328.5W	332.5W	336.2W
Maximum Power Voltage-Vmp(V)	37.84V	38.13V	38.42V	38.71V	39.00V
Maximum Power Current-Imp(A)	8.48A	8.52A	8.55A	8.59A	8.62A
Open Circuit Voltage -Voc(V)	45.56V	45.82V	46.08V	46.34V	46.60V
Short Circuit Current-Isc(A)	9.12A	9.14A	9.17A	9.19A	9.21A

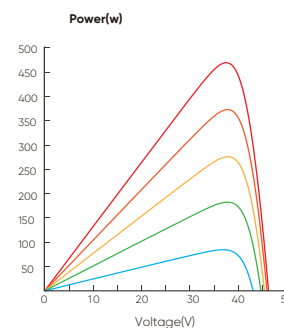
NOCT:Irradiance:800W/m<sup>2</sup>, Ambient Temperature:20°C,Air Mass:1.5,Wind Speed:1m/s

## I-V Curve



Current-Voltage Curve(460W)

- 1000W/m<sup>2</sup>
- 800W/m<sup>2</sup>
- 600W/m<sup>2</sup>
- 400W/m<sup>2</sup>
- 200W/m<sup>2</sup>



Power-Voltage Curve(460W)

- 1000W/m<sup>2</sup>
- 800W/m<sup>2</sup>
- 600W/m<sup>2</sup>
- 400W/m<sup>2</sup>
- 200W/m<sup>2</sup>