# la t S Series

N-Type TOPCon HALF-CELL MONO
PV MODULE



## SUNERGY USA WORKS LLC

Founded in 2008, Sunergy is a manufacturer of high-performance photovoltaic products. With 12 manufacturing bases and more than 20 branches around the world, the company's business covers modules, photovoltaic power stations and EPC. Sunergy products are available in over 120 countries and regions and are used extensively in ground-mounted power plants, commercial & industrial rooftop PV systems and residential rooftop PV systems.

## **QUALIFICATIONS AND CERTIFICATES**















# COMPREHENSIVE CERTIFICATES

IEC61215 / IEC61730 / IEC61701 / IEC62716 / IEC62804

ISO 9001: 2015 Quality management

ISO 14001: 2015 Environmental management systems;

ISO 45001: 2018 Occupational

health and safety management systems;

# **Sunergy Advantages**



## Overflow tank can be waterproof

The excess silicone will flow into the overflow tank, can reduce 3% water vapor entering the panels.



## Stronger frame

The C side of the frame contains curved hook reinforcement, enhanced the mechanical load strength by 10%



## Current grading

Current classification effectively avoids 2% power loss caused by current mismatch during installation, achieving max output power

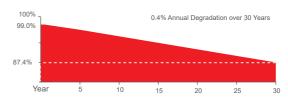


#### IP68 junction box

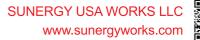
IP68 junction box offer perfect waterproof performance

## LINEAR PERFORMANCE WARRANTY

- 12 Years Manufacturing Warranty
- 12 Years 94.6% Power Output
- 30 Years 87.4% Power Output



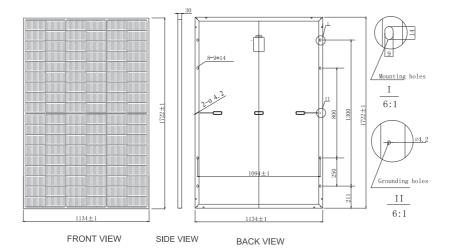








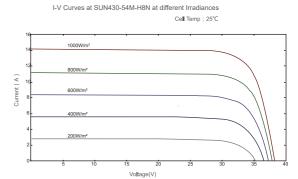
# **MECHANICAL DRAWINGS**



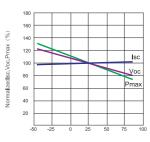
# MECHANICAL SPECIFICATION

Cell Type	N-Type Mono Crystalline 182x91mm
Number Of Cells	108 (6x18)
Dimensions(AxBxC)	1722x1134x30mm
Weights	20.3kg
Glass	3.2mm Tempered Low Iron Glass
Aluminium Frame	Anodised Aluminium
Junction Box	Split Junction Box (IP68 ,three diode)
Connector	Mc4 Compatible
Output Cables	4.0mm²,+300mm,-300mm Customized Length

# I-V CURVES



Power voltage current curve at different temperature



 $\mathsf{Cell} \, \mathsf{Temperature}(^\circ\!\mathsf{C})$ 

## PACKING CONFIGURATION

Container	40' HQ
Pieces Per Pallet	36
Pallets Per Container	26
Pieces Per Container	936

# **ELECTRICAL CHARACTERISTICS**

Module Type	430W	435W	440W	445W		
	STC NOCT	STC NOCT	STC NOCT	STC NOCT		
Maximum Power At STC(Pmax)	430W 324.6W	435W 328.3W	440W 332.1W	445W 335.9W		
Short Circuit Current(Isc)	14.21A 11.54A	14.32A 11.63A	14.41A 11.70A	14.54A 11.81A		
Open Circuit Voltage(Voc)	38.56V 36.52V	38.71V 36.66V	38.86V 36.81V	39.01V 36.95V		
Maximum Power Current(Impp)	13.44A 10.91A	13.54A 10.99A	13.63A 11.06A	13.76A 11.16A		
Maximum Power Voltage(Vmpp)	31.99V 29.75V	32.14V 29.87V	32.29V 30.02V	32.34V 30.09V		
Module Efficiency	22.00%	22.3%	22.5%	22.8%		
Power Tolerance	0~+5W	0~+5W	0~+5W	0~+5W		
Maximum System Voltage	VDC 1500V					
Maximum Series Fuse	25A					
Increased Snowload Acc.to Iec 61215	5400Pa					
Operating Temperature	-40∼+85°C					
Number Of Bypass Diodes	3					
Norminal Operating Cell Temperature(Noct)	45°C±2°C					
Temperature Coefficient Of Pmax	-0.30%℃					
Temperature Coefficient Of Voc	-0.25%℃					
Temperature Coefficient Of Isc	0.046%℃					

STC: 1000W/m2 irradiance, 25°C cell temperature, AM1.5. NOCT: Irradiance at 800W/m², Ambient Temperature 20°C , wind speed 1m/s.



