# at 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 systems;

ISO 14001: 2015 Environmental management systems; OHSAS 18001: 2007 Occupational

health and safety management systems;

## **KEY SALIENT FEATURES**



High output power



Better power generation under shadows



Strong anti-hot spot ability



Strong mechanical load capacity



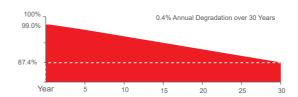
Super strong frame



1500V system voltage

### LINEAR PERFORMANCE WARRANTY

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

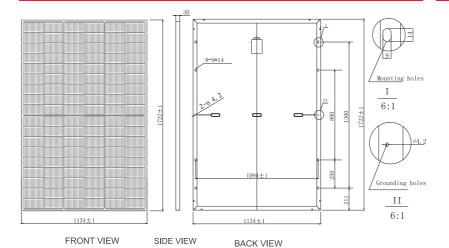








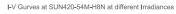
# **MECHANICAL DRAWINGS**

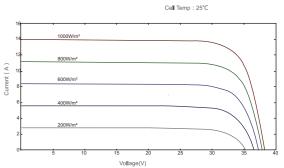


# MECHANICAL SPECIFICATION

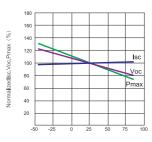
Cell Type	N-Type Mono Crystalline 182x91mm
Number Of Cells	108 (6x18)
Dimensions(AxBxC)	1722x1134x30mm
Weights	21.5kg
Glass	3.2mm Tempered Low Iron Glass
Aluminium Frame	Anodised Aluminium
Junction Box	Split Junction Box (IP68 ,three diode)
Connector	Mc4 Compatible
Output Cables	4.0mm²,+300mm,-300mm Customized Length

# I-V CURVES





Power voltage current curve at different temperature



Cell Temperature(°C)

## PACKING CONFIGURATION

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

# **ELECTRICAL CHARACTERISTICS**

Module Type	420W	425W	430W	435W
	STC NOCT	STC NOCT	STC NOCT	STC NOCT
Maximum Power At STC(Pmax)	420W 317.0W	425W 320.8W	430W 324.6W	435W 328.3W
Short Circuit Current(Isc)	14.02A 11.39A	14.12A 11.47A	14.21A 11.54A	14.32A 11.63A
Open Circuit Voltage(Voc)	38.26V 36.24V	38.41V 36.38V	38.56V 36.52V	38.71V 36.66V
Maximum Power Current(Impp)	13.26A 10.76A	13.35A 10.84A	13.44A 10.91A	13.54A 10.99A
Maximum Power Voltage(Vmpp)	31.69V 29.45V	31.84V 29.59V	31.99V 29.75V	32.14V 29.87V
Module Efficiency	21.5%	21.8%	22.00%	22.3%
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(N	oct)		45°C±2°C	
Temperature Coefficient Of Pmax			-0.30%°C	
Temperature Coefficient Of Voc			-0.25%℃	
Temperature Coefficient Of Isc			0.046%°C	

 $STC: 1000W/m2 \; irradiance, 25^{\circ}C \; cell \; temperature, AM1.5. \quad NOCT: \; Irradiance \; at \; 800W/m^2 \; , \; Ambient \; Temperature \; 20^{\circ}C \; \; , \; wind \; speed \; 1m/s \; .$ 



