



**Tier1**

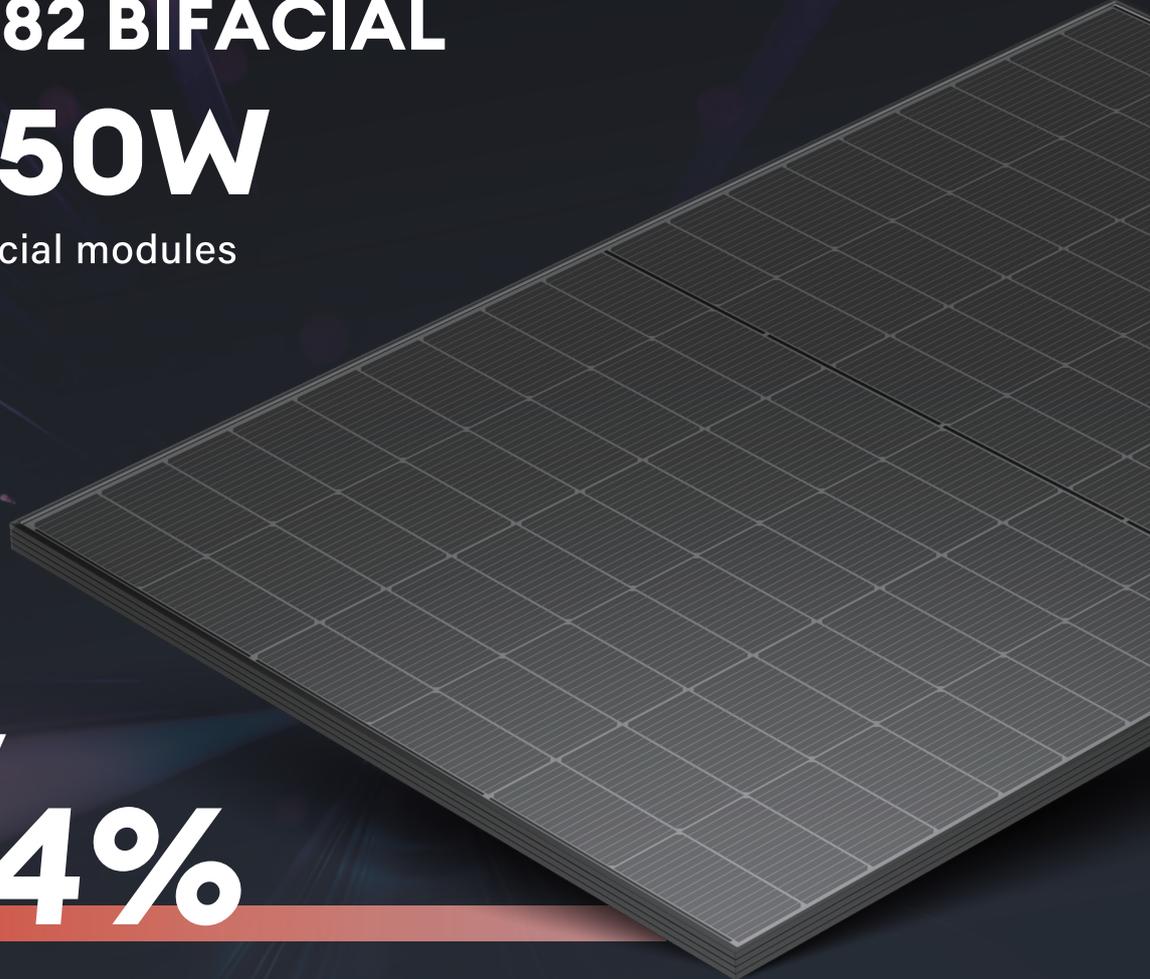
BloombergNEF

*Power the future*

# TOPCon 182 BIFACIAL

# 435-450W

High efficiency bifacial modules



## Module efficiency

# 23.04%



Better leveled cost of energy



Better high temperature stability



Improved low-light performance



Excellent bifacial performance

Linear performance guarantee for 30 years



## WARRANTY

Quality Guarantee **15** years

Power Warranty **30** years

## CERTIFICATE



## ELECTRIC CHARACTERISTICS

## SPDG (435/450W)-N108M10

Model of modules	SPDG435-N108M10		SPDG440-N108M10		SPDG445-N108M10		SPDG450-N108M10	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Power ( Pmax/W )	435	325.00	440	329.00	445	332.4	450	336.2
Maximu power current ( Vmp )	31.94	29.80	32.09	29.90	32.25	30	32.41	30.1
Maximu power current ( Imp )	13.62	10.91	13.72	11.00	13.8	11.08	13.89	11.16
Open circuit voltage ( Voc )	38.43	36.00	38.53	36.10	38.64	36.2	38.75	36.3
Short circuitcurrent ( Isc )	14.34	11.56	14.43	11.63	14.53	11.71	14.63	11.79
Module efficiency	22.28%		22.53%		22.79%		23.04%	

STC ( Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m<sup>2</sup> ,Cells Temperature25°C )

NMOT ( Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C,AM1.5,Wind Speed 1m/s )

## ELECTRICAL CHARACTERISTICS WITH 15% REAR SIDE POWER GAIN

Front power Pmax/W	500.25	506.00	511.75	517.50
Maximu power voltage ( Vmp )	31.94	32.09	32.25	32.41
Maximu power current ( Imp )	15.66	15.77	15.87	15.97
Open circuit voltage ( Voc )	38.43	38.53	38.64	38.75
Short circuitcurrent ( Isc )	16.49	16.59	16.71	16.82

## STRUCTURAL CHARACTERISTICS

Module size (L*W*H)	1722x1134x30mm
Weight	23.3kg
Cell	108 cells,N type Mono-Crystalline , 182mm×91mm
Front glass	2.0mm , Anti-Reflection Coating
Back glass	2.0mm , Heat Strengthened Glass
Frame	Anodized aluminum alloy
Junction box	IP68 , 3 bypass diodes
Output wire	4mm <sup>2</sup>
Wire length	Line length 1100mm/customized
Connector	MC4 Compatible
Packing Specification	36 pcs/Pallet ; 936pcs/40' HQ

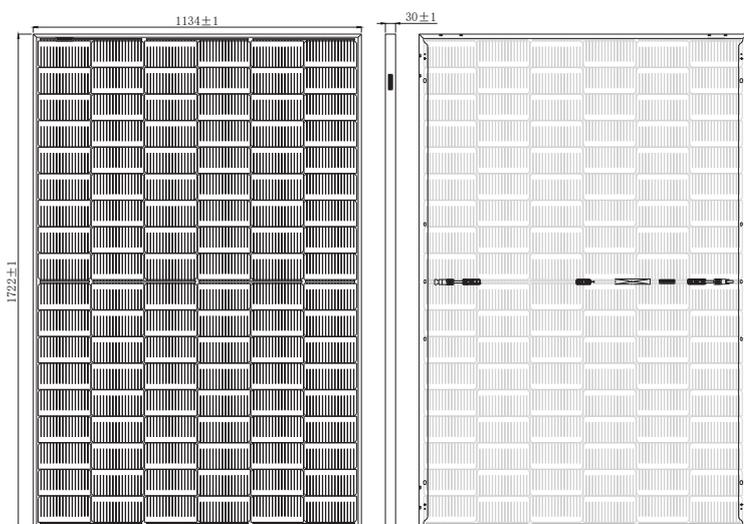
## OPERATING PARAMETERS

Power tolerance (W)	(0~+5W)
Maximum system voltage (V)	1500V
Maximum rated fuse current (A)	30A
Current operating temperature (C)	-40~+85°C
Mechanical load	+5400Pa/-2400Pa

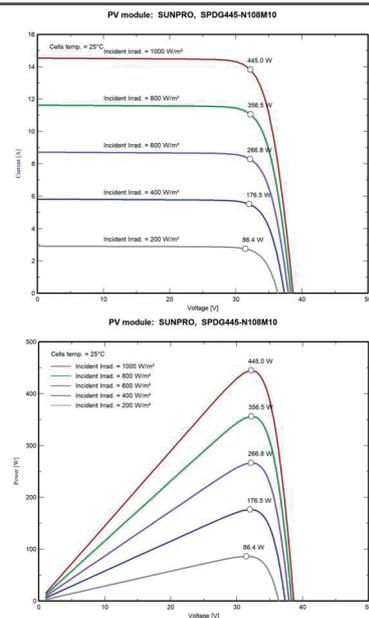
## TEMPERATURE CHARACTERISTICS

Temp. Coeff. of Isc (TK Isc)	0.046% / °C
Temp. Coeff. of Voc (TK Voc)	-0.25% / °C
Temp. Coeff. of Pmax (TK Pmax)	-0.30% / °C
Normal Operting Cell Temperature	45±2°C

## MODULE DIMENSIONS(MM)



## I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



**SUNPRO POWER NORTH AMERICA INC.**

Add.: STE 2, 206 N Randolph St, Champaign, IL 61820

E-mail: info@sunpropower.com Website: www.sunpropower.us

\*The above parameters are for reference only, and the actual parameters of the factory shall prevail