



**Tier1**

BloombergNEF

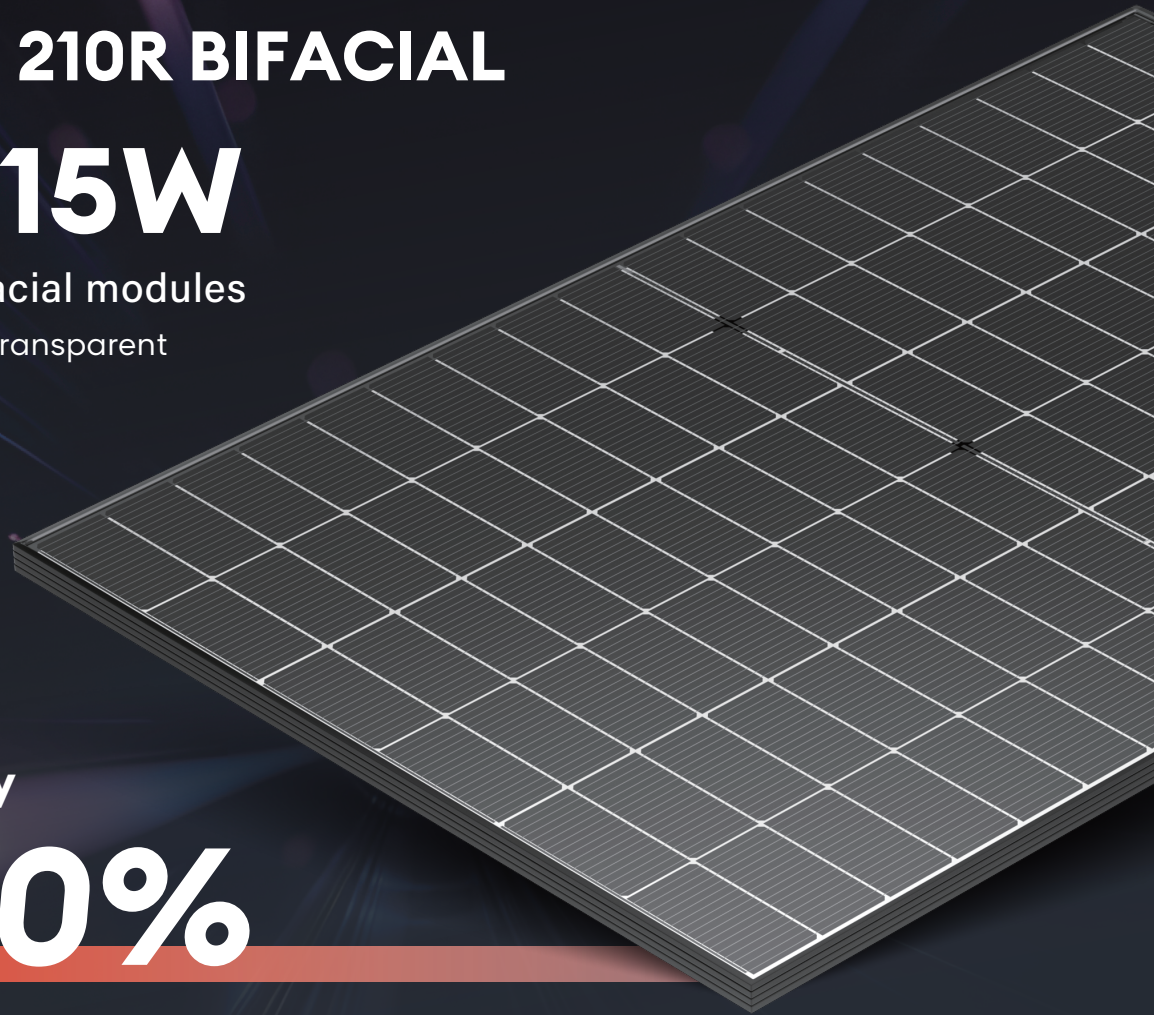
*Power the future*

# TOPCon 210R BIFACIAL

## 500-515W

High efficiency bifacial modules

· Black frame, Bifacial Transparent



 UTILITY

 C&I

Module efficiency

# 23.40%



Better leveled cost of energy



Better high temperature stability

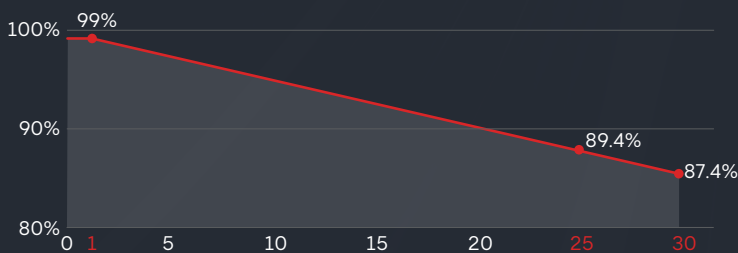


Improved low-light performance



Excellent bifacial performance

Linear performance guarantee for 30 years



### WARRANTY

Quality Guarantee **25** years

Power Warranty **30** years

### CERTIFICATE



Ariet Green



## ELECTRIC CHARACTERISTICS

## SPDG (500/515W)-N108R12

Model of modules	SPDG500-N108R12		SPDG505-N108R12		SPDG510-N108R12		SPDG515-N108R12	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Power ( Pmax/W )	500	378.10	505	382.20	510	386.40	515	390.30
Maximum power current ( Vmp )	33.38	31.40	33.60	31.60	33.85	31.90	34.09	32.10
Maximum power current ( Imp )	14.98	12.04	15.03	12.08	15.07	12.12	15.11	12.18
Open circuit voltage ( Voc )	40.01	37.90	40.24	38.10	40.48	38.40	40.71	38.6
Short circuitcurrent ( Isc )	15.83	12.75	15.88	12.79	15.93	12.83	15.98	12.87
Module efficiency	22.50%		22.72%		22.95%		23.17%	

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	575.00	580.75	586.50	592.25
Maximum power voltage ( Vmp )	33.38	33.60	34.85	34.09
Maximum power current ( Imp )	17.23	17.28	17.33	17.37
Open circuit voltage ( Voc )	40.01	40.24	40.48	40.71
Short circuitcurrent ( Isc )	18.20	18.26	18.32	18.38

## STRUCTURAL CHARACTERISTICS

Module size (L*W*H)	1960x1134x30mm
Weight	26.6kg
Cell	108 cells,N type Mono-Crystalline , 182.2mm×105 mm
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 1300mm/customized
Connector	MC4 Compatible
Packing Specification	37 pcs/Pallet ; 888 pcs/40' HQ

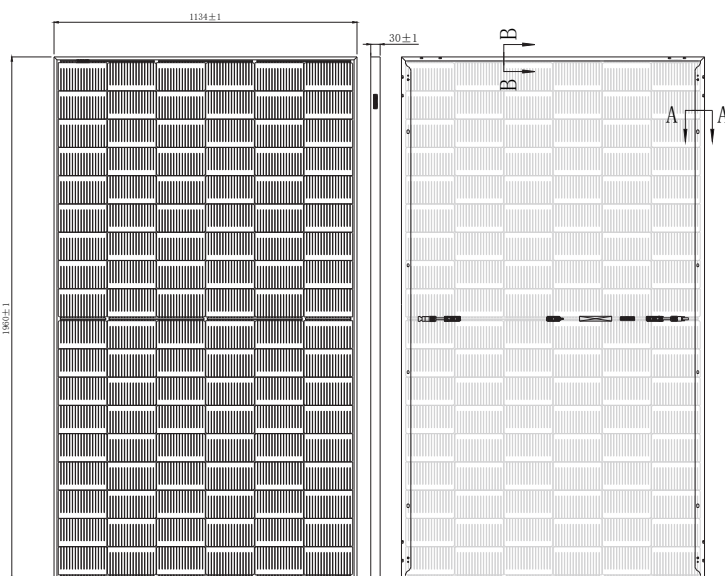
## OPERATING PARAMETERS

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

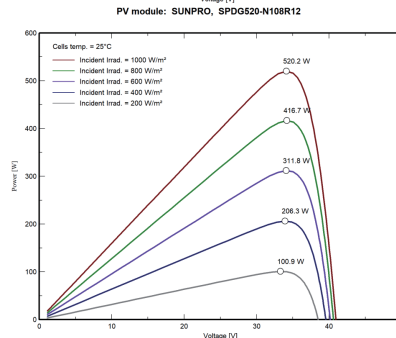
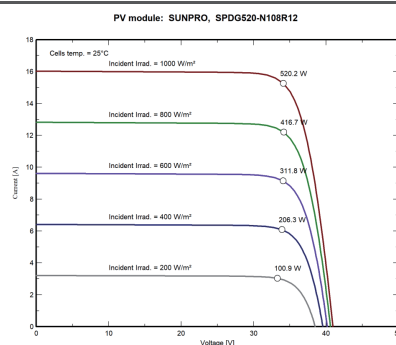
## TEMPERATURE CHARACTERISTICS

Temp. Coeff. of Isc (TK Isc)	0.045% / °C
Temp. Coeff. of Voc (TK Voc)	-0.25% / °C
Temp. Coeff. of Pmax (TK Pmax)	-0.30% / °C
Normal Operating Cell Temperature	45±2°C

## MODULE DIMENSIONS(MM)



## I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



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