



**Tier1**

BloombergNEF

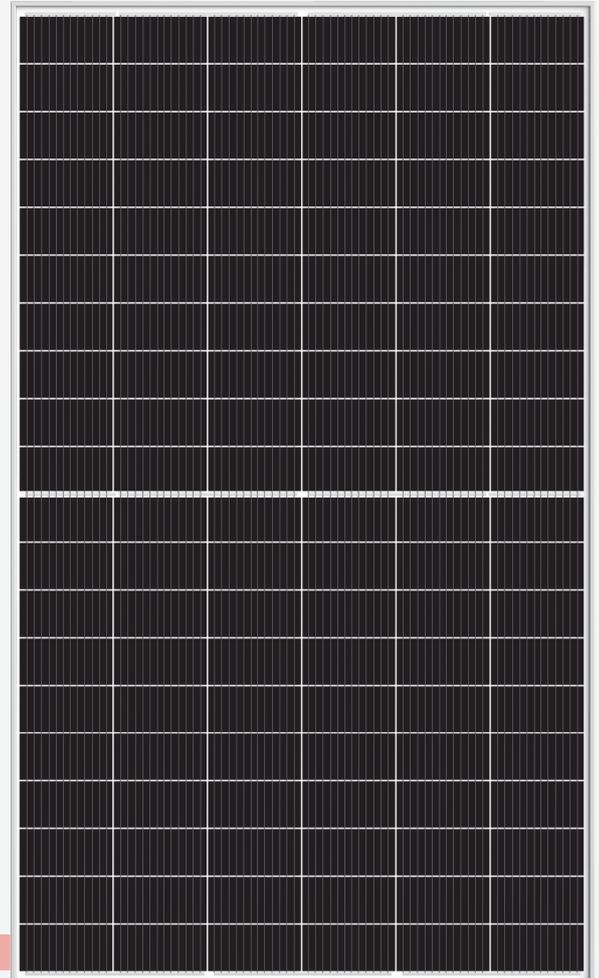
*Power the future*

# PERC 210 BIFACIAL

# 590-615W

High efficiency bifacial modules

· Silver frame, white mesh



 UTILITY

 C&I

## Module efficiency

# 21.73%



**Better leveled cost of energy**



**Better high temperature stability**

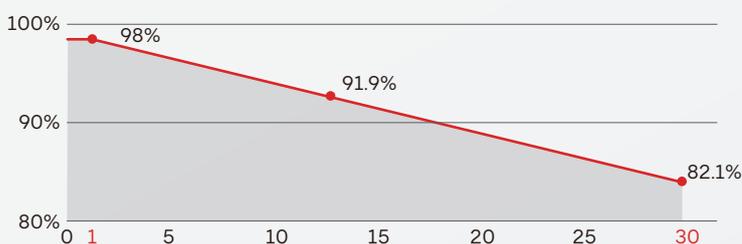


**Improved low-light performance**



**Excellent bifacial performance**

Linear performance guarantee for 30 years



## WARRANTY

Quality Guarantee **15 years**

Power Warranty **30 years**

## CERTIFICATE



## ELECTRIC CHARACTERISTICS

## SPDG (590/615W)-120M12

Model of modules	SPDG590-120M12		SPDG595-120M12		SPDG600-120M12		SPDG605-120M12		SPDG610-120M12		SPDG615-120M12	
	STC	NMOT										
Power ( Pmax/W )	590	441.00	595	445.00	600	449.00	605	453.00	560	457.00	565	461.00
Maximum power voltage ( Vmp )	34.00	31.70	34.20	31.80	34.40	32.10	34.60	32.20	34.80	32.40	35.01	32.60
Maximum power current ( Imp )	17.35	13.92	17.40	13.97	17.45	14.02	17.49	14.06	17.53	14.10	17.57	14.14
Open circuit voltage ( Voc )	41.10	38.60	41.30	38.80	41.50	39.00	41.70	39.20	41.90	39.40	42.10	39.60
Short circuit current ( Isc )	18.42	14.82	18.47	14.86	18.52	14.90	18.57	14.94	18.62	14.98	18.67	15.02
Module efficiency	22.30%		21.02%		21.20%		21.38%		21.55%		21.73%	

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	678.50	684.25	690.00	695.75	701.50	707.25
Maximum power voltage ( Vmp )	34.00	34.20	34.40	34.60	34.80	35.01
Maximum power current ( Imp )	19.96	20.01	20.06	20.11	20.16	20.20
Open circuit voltage ( Voc )	41.10	41.30	41.50	41.70	41.90	42.10
Short circuit current ( Isc )	21.18	21.24	21.30	21.35	21.41	21.49

## STRUCTURAL CHARACTERISTICS

Module size (L*W*H)	2172x1303x35mm
Weight	34.2kg
Cell	120 cells,Mono-Crystalline PERC,210mm x 105mm
Front glass	2.0mm ultra clear embossed semi-tempered coated glass
Back glass	2.0mm white mesh glazed tempered glass
Frame	Anodized aluminum alloy
Junction box	IP68
Output wire	4mm <sup>2</sup>
Wire length	Line length 1300mm
Connector	MC4 Compatible IP68
Packing Specification	31 pcs/Pallet ; 558 pcs/40' HQ

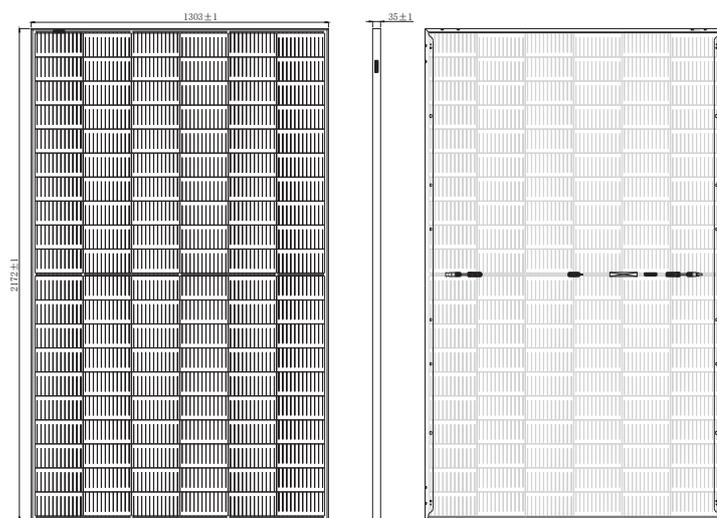
## OPERATING PARAMETERS

Power tolerance (W)	(0~+5W)
Maximum system voltage (V)	1500V(TUV/UL)
Maximum rated fuse current (A)	35A(TUV)/40A(UL)
Current operating temperature (C)	-40~+85°C
Mechanical load	+5400Pa/-2400Pa

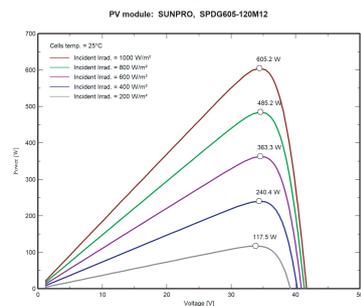
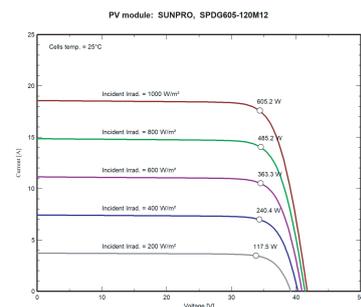
## TEMPERATURE CHARACTERISTICS

Temp. Coeff. of Isc (TK Isc)	0.05% / °C
Temp. Coeff. of Voc (TK Voc)	-0.27% / °C
Temp. Coeff. of Pmax (TK Pmax)	-0.34% / °C
Normal Operating Cell Temperature	44±2°C

## MODULE DIMENSIONS(MM)



## I-V CHARACTERISTICS AT DIFFERENT IRRADIATION



**Zhejiang Sunpro Power Technology Co., Ltd**

Add: Qinggang Industrial Zone, Yuhuan City, Zhejiang Province

Tel: +86 0576-80730906 E-mail: info@sunpropower.com Website: www.sunpropower.com

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