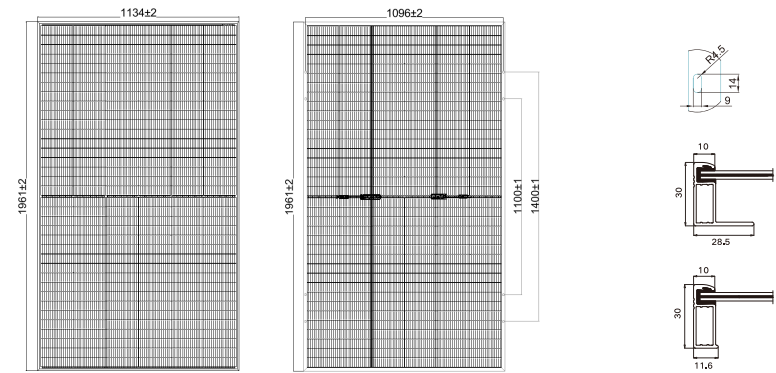


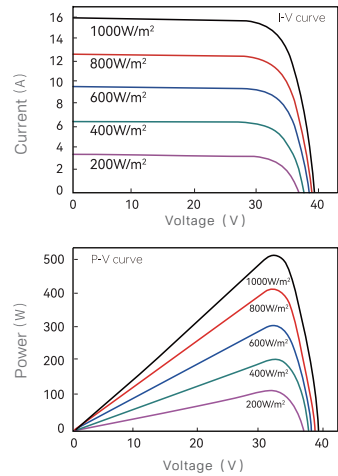


Engineering Drawings



Tolerance: Length: ±2mm Width: ±2mm

I-V and P-V Curves Temperature: (25 ± 2) °C



Electrical Characteristics

Module Type	510	515	520	525	530	535	540
Maximum Power Pmax (W)	510	515	520	525	530	535	540
Voltage at Maximum Power (Vmp/V)	34.24	34.41	34.58	34.75	34.92	35.09	35.26
Current at Maximum Power (Imp/A)	14.90	14.97	15.04	15.11	15.18	15.25	15.32
Open Circuit Voltage (Voc/V)	40.14	40.33	40.52	40.71	40.90	41.09	41.28
Short Circuit Current (Isc/A)	15.81	15.87	15.93	15.99	16.05	16.11	16.17
Module Efficiency (%)	22.9	23.2	23.4	23.6	23.8	24.1	24.3
Pmax/Voc/Isc Tolerance	±3%						
Maximum Series Fuse Rating	30A						
Fire Rating	Class C						

STC: Irradiance 1000W/m², Cell Temperature 25°C, AM=1.5							
Maximum Power Pmax (W)	561	567	572	578	583	589	594
Voltage at Maximum Power (Vmp/V)	34.24	34.41	34.58	34.75	34.92	35.09	35.26
Current at Maximum Power (Imp/A)	16.39	16.47	16.54	16.62	16.70	16.78	16.85
Open Circuit Voltage (Voc/V)	40.14	40.33	40.52	40.71	40.90	41.09	41.28
Short Circuit Current (Isc/A)	17.39	17.46	17.52	17.59	17.66	17.72	17.79
aBSI(A)	19.32	19.40	19.47	19.54	19.62	19.69	19.76
Pmax/Voc/Isc/aBSI Tolerance	±3%						
Bifaciality Coefficient	φVoc: 100±3 %, φIsc: 80±10 %, φPmax: 80±10 %						

BNPI: Irradiance Front 1000W/m², Rear 135W/m² Cell Temperature 25°C, AM=1.5
aBSI: Irradiance Front 1000W/m², Rear 300W/m² Cell Temperature 25°C, AM=1.5

Mechanical Characteristics

Cell Type	N- type mono-crystalline
Cell Orientation	216
Dimension	1961 x 1134 x 30mm
Weight	27.5kg
Glass	Dual glass, 2.0mm+2.0mm semi-tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68 rated
Output Cables	4mm², 1200mm(+)/1200mm(-) or customized length
Connector Type	Z4S-abcd(Zerun)/PV-ZH202B(Zhonghuan)/PV-HT03x(Haitian)/QC4.10-cds(QC Solar)
Mechanical Load	+5400Pa / -2400Pa

Temperature Characteristics

Temperature Coefficients of Pmax	-0.30%/°C
Temperature Coefficients of Voc	-0.25%/°C
Temperature Coefficients of Isc	0.046%/°C
Temperature Rating [T98]max	70°C

Packaging Configuration

Pallet Dimension	1991 x 1120 x 1250 mm
Packing Detail	37 pcs/pallets, 74 pcs/stack, 864 pcs/ 40'HQ container

Sungrow Renewables Development Co., Ltd

SUNGROW

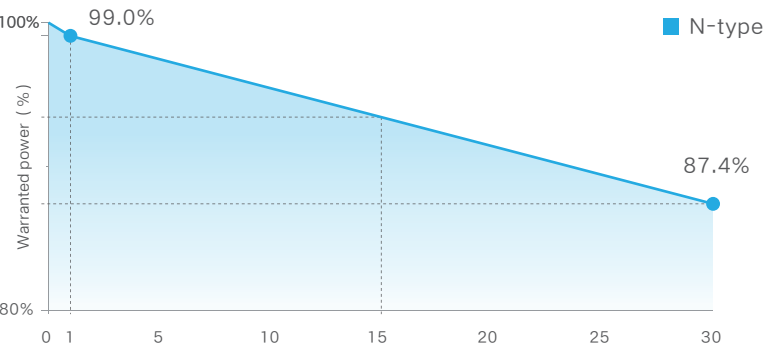
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*Specifications included in this datasheet are subject to change without notice. Sungrow Renewables reserves the right of final interpretation.

Quality Certification



Product Warranty



25-year Warranty for Materials and Processing

30-year Warranty for Extra Linear Power Output

First Year Power Degradation<1%

Year 2-30 Power Degradation<0.4%

Power warranty applies at STC condition or only applies to the front side of the module

Product Performance

Higher Efficiency
Excellent MBB technology and leading process technology, conversion efficiency up to 24.3%

Smaller Size
A lightweighted design for convenient transportation and installation

Higher Bifacial Factor
The rear power output and generation capacity are 20% and 3.5% higher than PERC, respectively

Superior Temperature Coefficient
Generating 1%-2% more power than P-type modules in high temperature regions

Non-destructive Laser Cutting Technology
Achieving better cell strength, lower micro-cracks risk for better product reliability

Superior Mechanical Load Capacity
Heavy snow load up to 5400 Pa wind load up to 2400 Pa