

M11LN-ST-16BB -180208

High Efficiency N-type Monocrystalline Silicon Bifacial TOPCon Solar Cell



Higher Conversion Efficiency, Average Efficiency of Mass Production > 26.4%, Theoretical Efficiency > 27%



Lower Temperature Coefficient, Lowest to -0.30%/°C



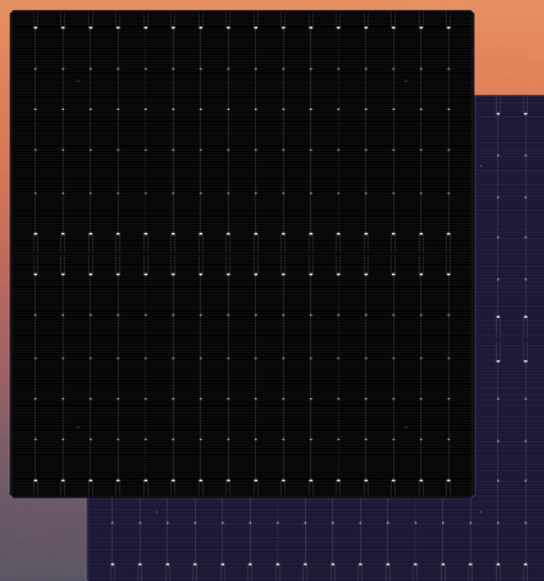
Bifaciality Over 85%



Better Weak Light Generation, Extending The Module Working Time In The Morning And Evening Over 1 Hour



Better Reliability And Lower Degradation



Frontside Electrical Performance Distribution

Cell model	Unit	25.00	24.90	24.80	24.70	24.60	24.50	24.40	24.30	24.20	24.10	24.00
Open Circuit Voltage	V	0.718	0.717	0.717	0.717	0.716	0.715	0.714	0.713	0.712	0.711	0.71
Short-circuit Current	A	14.705	14.697	14.668	14.639	14.631	14.622	14.613	14.604	14.595	14.585	14.576
Operation Voltage	V	0.615	0.614	0.612	0.611	0.609	0.608	0.607	0.607	0.605	0.603	0.601
Operation Current	A	14.189	14.156	14.145	14.111	14.100	14.066	14.031	13.974	13.962	13.951	13.939
Maximum Output	W	8.73	8.69	8.66	8.62	8.59	8.55	8.52	8.48	8.45	8.41	8.38
Efficiency	%	25	24.9	24.8	24.7	24.6	24.5	24.4	24.3	24.2	24.1	24.0
Standard Test Conditions: 1000W/m2, AM1.5, 25°C												

Backside Electrical Performance Distribution

Cell model	Unit	>20.50	20.25-20.50	20-20.25	<20.00
Open Circuit Voltage	V	0.692	0.691	0.69	0.689
Short-circuit Current	A	13.463	13.416	13.369	13.348
Operation Voltage	V	0.586	0.585	0.584	0.582
Operation Current	A	12.084	12.063	12.021	11.989
Maximum Output	W	7.08	7.06	7.02	6.98
Efficiency	%	>20.5	20.25-20.5	20-20.25	<20.00
Standard Test Conditions: 1000W/m2, AM1.5, 25°C					

Design And Dimensional Parameters

Substrate Material	N-type monocrystalline silicon wafer
Thickness	130μm±10μm
Edge Length	191.6mm*182.2mm±0.5mm
Diagonal Length	Φ262.5mm±0.5mm
Frontside(-)	16*0.030±0.015mm Busbar (Silver), 180 Fingers, Blue (Dark Blue) Color Anti-Reflective Film (Silicon Nitride)
Backside(+)	16*0.030±0.015mm Busbar (Silver), 208 Fingers, Blue (Dark Blue) Color Anti-Reflective Film (Silicon Nitride)

Degradation & CTM

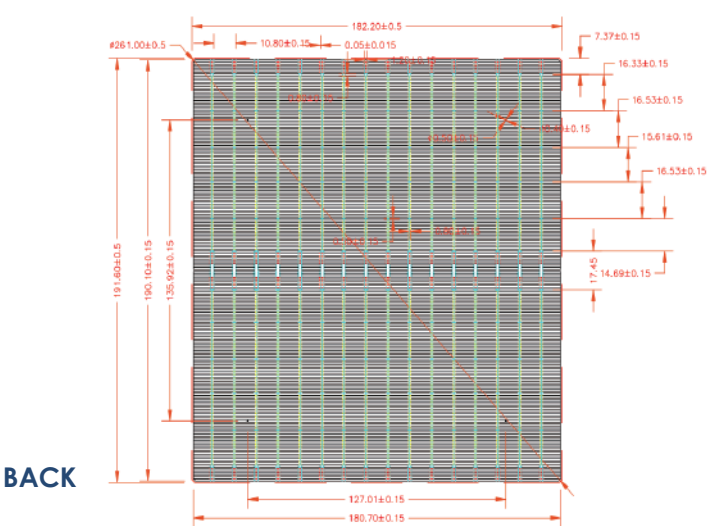
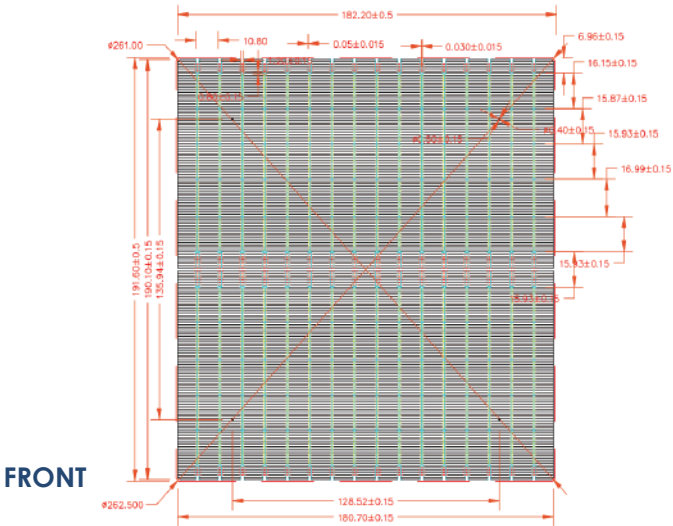
Irradiance: 1000W/m², Standard solar spectrum(AM 1.5), total irradiation: 5 kwh/m², Degradation of cell efficiency by≤2%
Cell to module loss<3%
-1500 volts, 192 hours, power degradation<5%

Packaging and storage

The packaging box is heat shrinkable and surrounded by foam air cushions for shock absorption and cushioning, reducing the impact of long-distance transportation on the product. The packaged batteries are stored indoors in a well ventilated and dry environment, with humidity controlled below 60%.

* Design technical data changes and specific instructions for testing conditions. The right to final interpretation reserved.

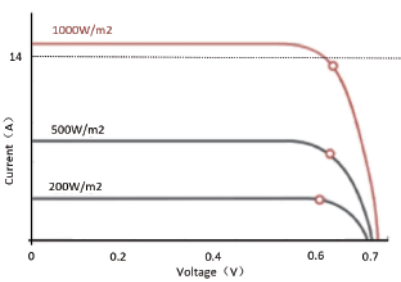
Appearance



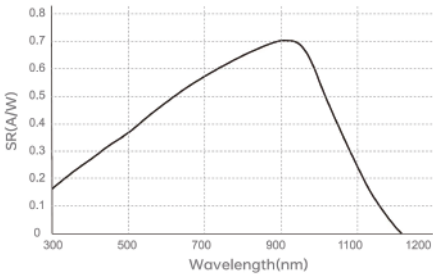
Light Intensity Reliability

Light intensity(W/m²)	1000	900	800	600	400
Open circuit voltage	1.0	0.998	0.991	0.987	0.962
short-circuit current	1.0	0.904	0.803	0.602	0.401
Using Uoc (Isc) tested at (1000W/m2, AM1.5, 25 ° C) as the standard, measure the magnitude of Uoc (Isc) decrease with light intensity					

I-V Curve



Spectral Response Curve



Temperature Coefficient

Maximum power temperature coefficient	-(0.32±0.02)%/k
Maximum Voc	-(0.28±0.03)%/k
Maximum Isc	+(0.06±0.015)%/k