RI solar
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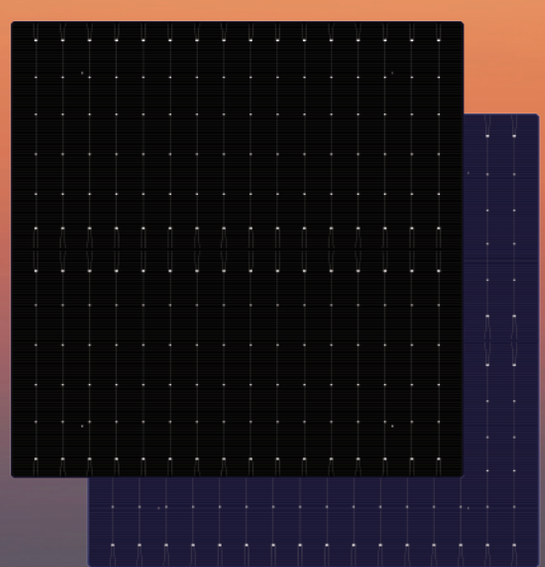
TOPCon
Technology

M10MN-ST-16BB -160176

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	14.092	14.084	14.056	14.028	14.020	14.012	14.003	13.995	13.986	13.977	13.968
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	13.597	13.565	13.555	13.522	13.512	13.479	13.446	13.391	13.380	13.369	13.357
Maximum Output	W	8.37	8.33	8.30	8.27	8.23	8.20	8.17	8.13	8.10	8.07	8.03
Efficiency	%	25.0	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

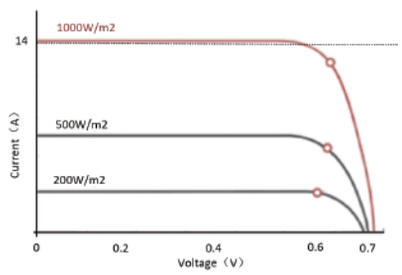
Cell model	Unit	>20.50	20.25-20.50	20-20.25	<20.00
Open Circuit Voltage	V	0.692	0.691	0.69	0.689
Short-circuit Current	A	12.901	12.857	12.811	12.791
Operation Voltage	V	0.586	0.585	0.584	0.582
Operation Current	A	11.580	11.560	11.519	11.489
Maximum Output	W	6.79	6.76	7.73	6.69
Efficiency	%	>20.5	20.25-20.5	20-20.25	<20.00
Standard Test Conditions: 1000W/m2, AM1.5, 25°C					

Light Intensity Reliability

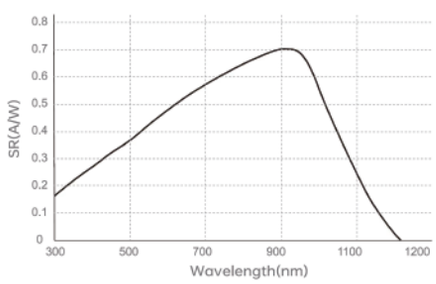
Light intensity(W/m²)	1000	900	800	600	400
Open circuit voltage	1.0	0.997	0.991	0.989	0.963
short-circuit current	1.0	0.904	0.803	0.602	0.404

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



Design And Dimensional Parameters

Substrate Material	N-type monocrystalline silicon wafer
Thickness	130μm±10μm
Edge Length	182.2mm*183.75mm±0.5mm
Diagonal Length	Φ256mm±0.5mm
Frontside(-)	16*0.036±0.015mm Busbar (Silver), 160 Fingers, Blue (Dark Blue) Color Anti-Reflective Film (Silicon Nitride)
Backside(+)	16*0.036±0.015mm Busbar (Silver), 176 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%.

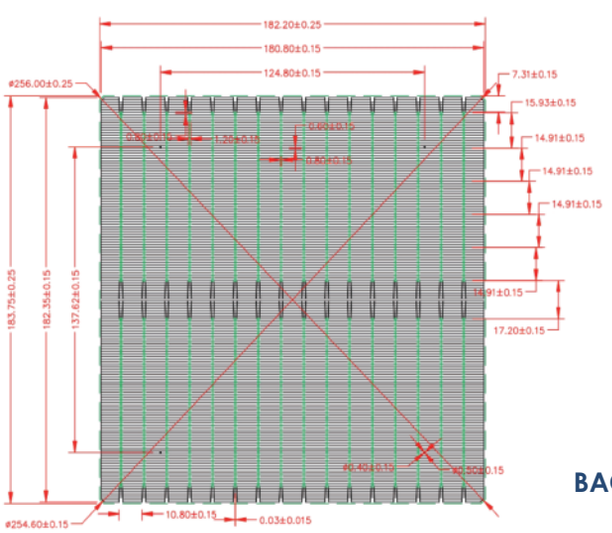
*** Design technical data changes and specific instructions for testing conditions. The right to final interpretation reserved.**

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

Appearance

FRONT



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