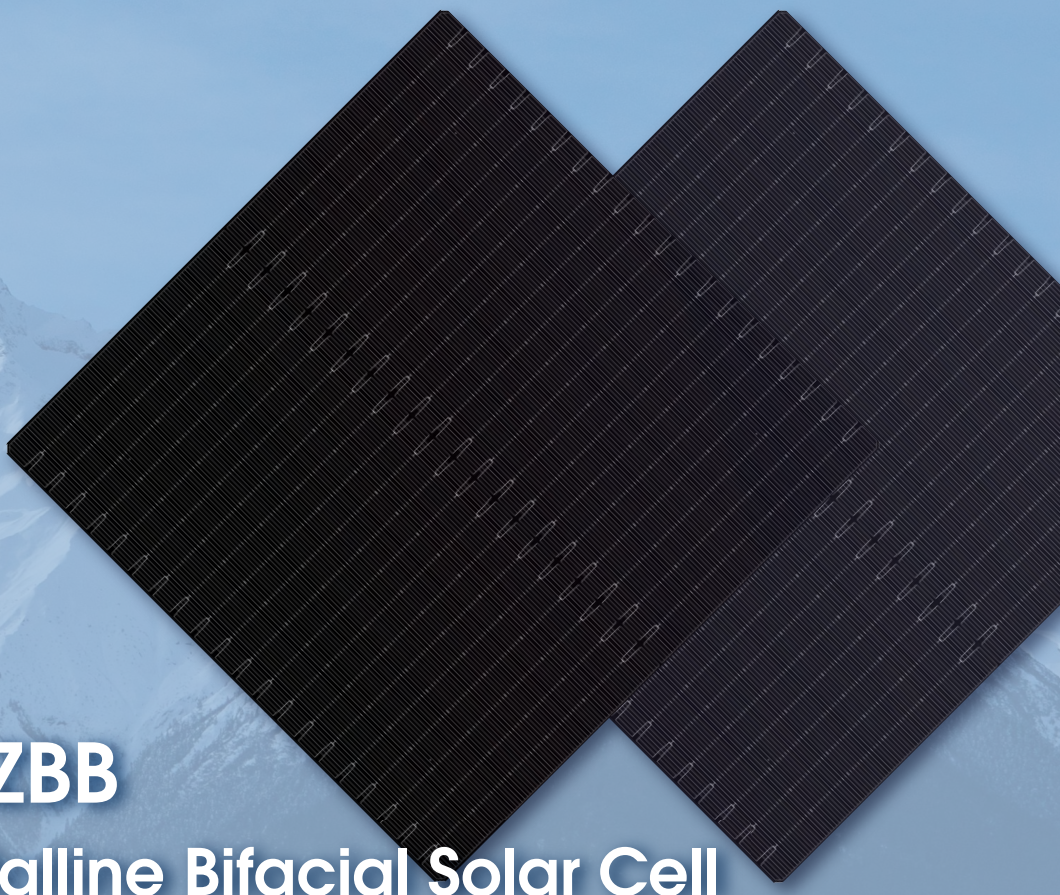


TOPCon182 ZBB

182 Mono-Crystalline Bifacial Solar Cell

Test Efficiency

25.4-26.3%

Temperature Coefficients

Temperature coefficient of Pmax	-0.35%/K
Temperature coefficient of Vocmax	-0.30%/K
Temperature coefficient of Iscmax	+0.048%/K

Product Characteristics

High Efficiency

TOPCon cells have a thin film of tunneling oxide silicon and a layer of heavily doped polycrystalline silicon, greatly reducing the recombination velocity of the back surface field and the recombination at the rear metalized contacts, gaining a high Voc of more than 700 mV. They have an efficiency several percentage points higher than that of

Low Attenuation Rate

As N-type silicon wafers are doped with phosphorus elements, no boron-oxygen pairs are formed to result in a recombination center and further electron capture losses, making the light-induced attenuation almost zero. The attenuation rate of TOPCon components is 1% in the first year, 50% that of PERC cells, and attenuation is 0.4% per year thereafter (which is about 0.45% for PERC).

Low Temperature Coefficient

The temperature coefficient of P-type components is –0.34%/°C, while that of N-type TOPCon components is as low as –0.30%/°C, making the latter outstanding in terms of generation capacity in high-temperature environments.

High Bifaciality Factor

TOPCon cells have a bifaciality factor of up to 85%, and the figure is only about 70% for PERC ones. Large-scale bases usually have a high ground reflectivity (usually 30%) due to vastness. Therefore, H-type components with a high bifaciality factor will deliver higher power generation gains.

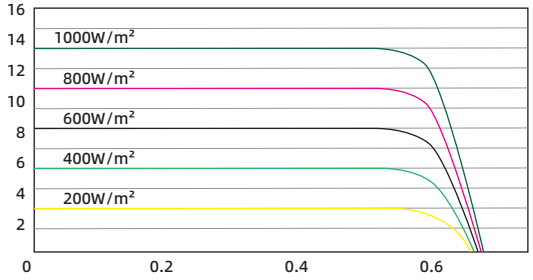
Electrical Characteristics

Eta (%)	26.30	26.20	26.10	26.00	25.90	25.80	25.70	25.60	25.50	25.40
Pmp (W)	8.80	8.77	8.74	8.70	8.67	8.64	8.60	8.57	8.54	8.50
Voc (V)	0.734	0.733	0.732	0.732	0.731	0.730	0.729	0.728	0.727	0.726
Isc (A)	14.129	14.120	14.105	14.056	14.034	14.021	14.010	14.001	13.990	13.973
Vmp (V)	0.635	0.634	0.632	0.631	0.630	0.628	0.626	0.624	0.622	0.620
Imp (A)	13.865	13.845	13.823	13.788	13.762	13.758	13.755	13.734	13.730	13.710

*Standard Test Conditions: 1000W/m², AM1.5, 25℃

Mechanical Characteristics

Model	182 Mono-Crystalline Bifacial Solar Cell (TOPCon 182 ZBB)
Dimension	183.75mm*182.2mm±0.25mm
Thickness	130±10μm
Front	20x0.05mm main grid lines (silver), 160auxiliary grid lines, blue anti-reflection film (silicon oxynitride) (nitrous oxide process)
Back	20x0.05mm main grid lines (silver), 168 auxiliary grid lines; blue anti-reflection film (silicon nitride)



Light Strength Reliability

Intensity(w/m²)	Uoc	Isc
1000	1.000	1.000
800	0.99	0.8
600	0.98	0.6
400	0.96	0.4
200	0.93	0.2

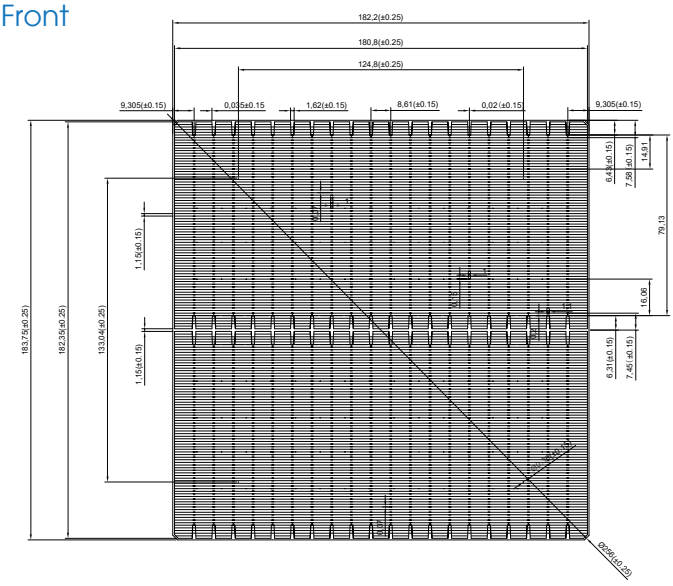
*Voc(Isc)measured at 1000W/m², the extent of Uoc(Isc)decreasing with light intensity

Packaging Information

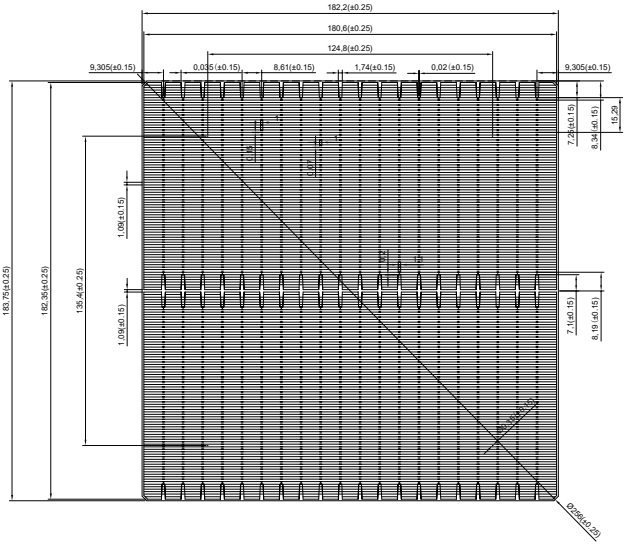
Packaging	Pcs/Box	Box/Carton	Pcs/Carton
	120	14	1680

Cell Drawing

Front



Back



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