

TOPCon210 ZBB

210 Mono-Crystalline Bifacial Solar Cell

Test Efficiency



25.7-26.6%

Temperature Coefficients

Temperature coefficient of Pmax	-0.30%/K
Temperature coefficient of Vocmax	-0.25%/K
Temperature coefficient of Iscmax	+0.05%/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 $-0.34\%/^{\circ}\text{C}$, while that of N-type TOPCon components is as low as $-0.30\%/^{\circ}\text{C}$, 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

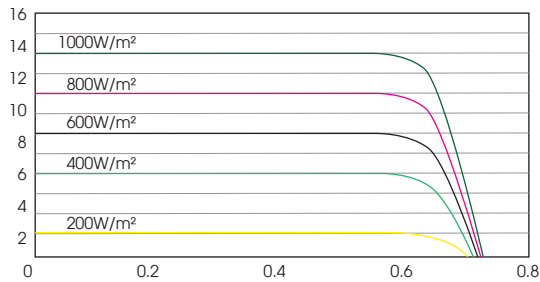
Eta (%)	26.60	26.50	26.40	26.30	26.20	26.10	26.00	25.90	25.80	25.70
Pmp (W)	11.73	11.69	11.64	11.60	11.55	11.51	11.46	11.42	11.38	11.33
Voc (V)	0.734	0.734	0.733	0.733	0.733	0.732	0.732	0.731	0.731	0.730
Isc (A)	18.880	18.862	18.847	18.826	18.804	18.780	18.765	18.751	18.734	18.721
Vmp (V)	0.639	0.639	0.639	0.638	0.638	0.637	0.637	0.637	0.636	0.636
Imp (A)	18.345	18.284	18.227	18.166	18.111	18.056	17.998	17.940	17.885	17.830

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

Mechanical Characteristics

Model	210 Mono-Crystalline Bifacial Solar Cell (TOPCon 210 ZBB)
Dimension	210mmx210mm±0.25mm
Thickness	130±10μm
Front	24 × 0.05 mm main grid lines (silver), 168 auxiliary grid lines, blue anti-reflection film (silicon oxynitride) (nitrous oxide process)
Back	24 × 0.05 mm main grid lines (silver), 174 auxiliary grid lines; blue anti-reflection film (silicon nitride)

IV Curve



Light Strength Reliability

Intensity(w/m ²)	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
	150	12	1800

Cell Drawing

