



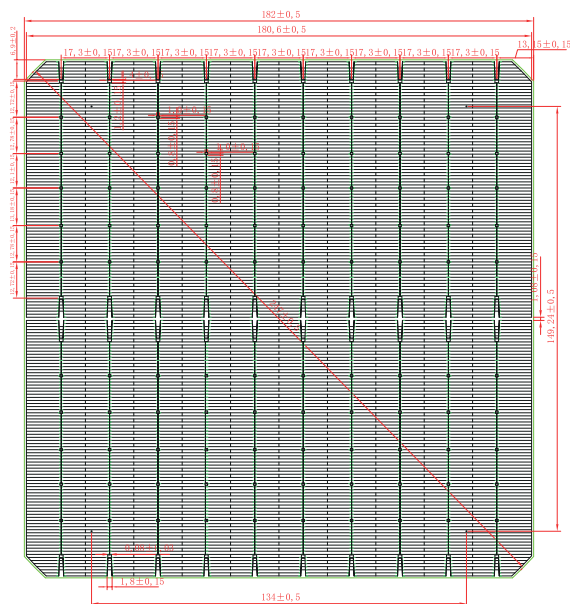
FOUR SEAS SOLAR

TSM10M0110

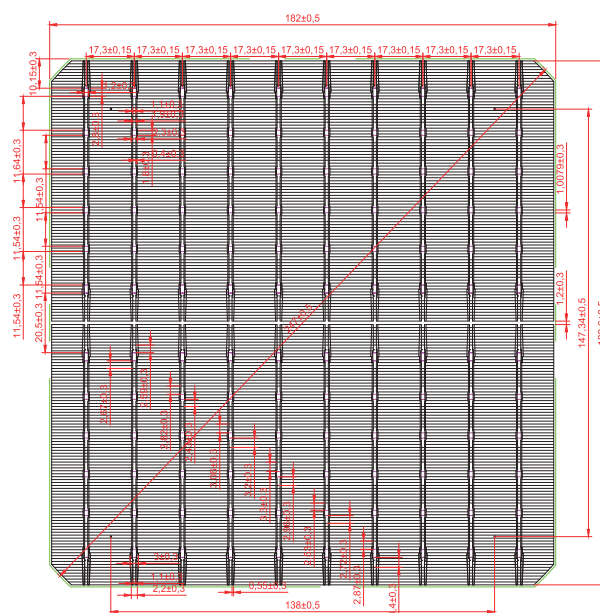
182 Monocrystalline Bifacial P-Type Solar Cell

- Ultra-Efficient Solar cells with an anisotro
- Silicon nitride anti-reflection coating
- Low pressure diffusion with good uniformity silver
- Front contact bars and aluminum local back surface file

PRODUCT APPEARANCE



Front



Back



FOUR SEAS SOLAR

ELECTRICAL PERFORMANCE

Grade(Unit)	23.30	23.20	23.10	23.00	22.90	22.80	22.70	22.60	22.50	22.40	22.30	22.20
Voc(V)	0.689	0.688	0.687	0.686	0.685	0.684	0.683	0.682	0.681	0.680	0.679	0.678
Isc(A)	13.654	13.623	13.592	13.563	13.534	13.503	13.478	13.453	13.428	13.403	13.381	13.359
Vmpp(V)	0.599	0.598	0.597	0.596	0.595	0.594	0.593	0.592	0.591	0.590	0.589	0.588
Impp(A)	12.84	12.81	12.77	12.74	12.71	12.67	12.64	12.6	12.57	12.53	12.500	12.47
Pmpp(W)	7.69	7.66	7.63	7.59	7.56	7.53	7.49	7.46	7.43	7.40	7.36	7.33

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

APPEARANCE AND STRUCTURE

Substrate material	P-type mono crystalline silicon wafer
Cell thickness	150μm±15μm
Dimension	182mm*182mm±0.5mm
Diagonal	247mm±0.5mm
Front(-)	10*0.08mm±0.03mm bus bars(silver)168 lines, silicon oxide+blue silicon nitride compound anti-reflection coating (PID free)
Back (+)	1.2±0.3mm wide soldering pads(silver), Aluminum oxide and Aluminum lines back-surface field, Laser design of vertical bus bars

TEMPERATURE COEFFICIENT

TkPower	-(0.39±0.02)%/k
TkVoltage	-(0.33±0.03)%/k
TkCurrent	+(0.006±0.015)%/k

LIGHT INDUCED DEGRADATION

Using Xenon lamp (Irradiance of 1000W/m², with spectrum AM 1.5) to irradiate test cells, after a total irradiation of 5 kwh/m², the degradation of maximum output power of cells is ≤2%

CTM

Lower cell to module (CTM) power loss: ≤3%

ANTI-PLD

Potential induced Degradation(-1500V, 192h): ≤5%

PACKAGING, STORAGE

Solar cells are closely packed with soft sponge around and heat shrink is used around the box unit, Outer packing box must have shock buffer, to be suitable for long-distance delivery.

After packaging, cells should be stored indoors in the conditions of good ventilation, dry, humidity below 60%, and temperature ≤40 °C. Cells should be sampling inspected again if the storage time over 45 days.



PT. Thornova Solar Indonesia, Jl. Brigjen Katamso,
Tj. Uncang, Kec. Batu Aji, Kota Batam, Kepulauan Riau 29466
sales@ptfourseas.com

TSM10M0110

www.fourseasolar.com