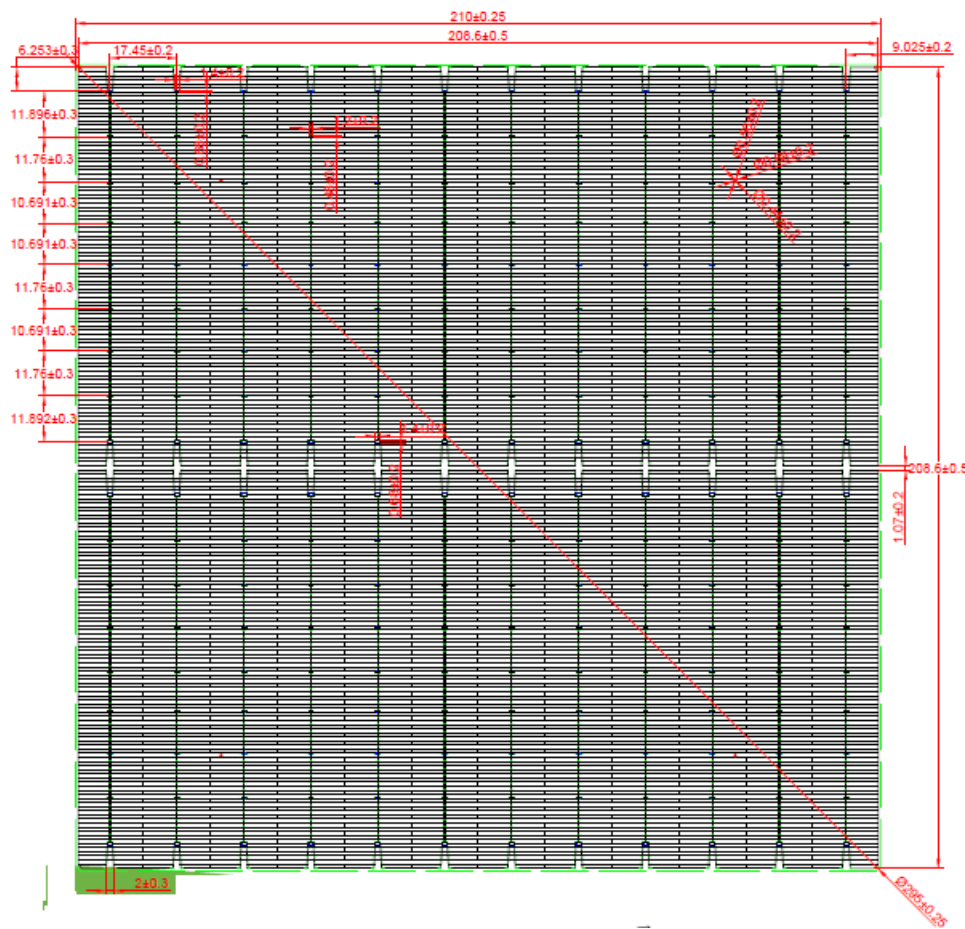
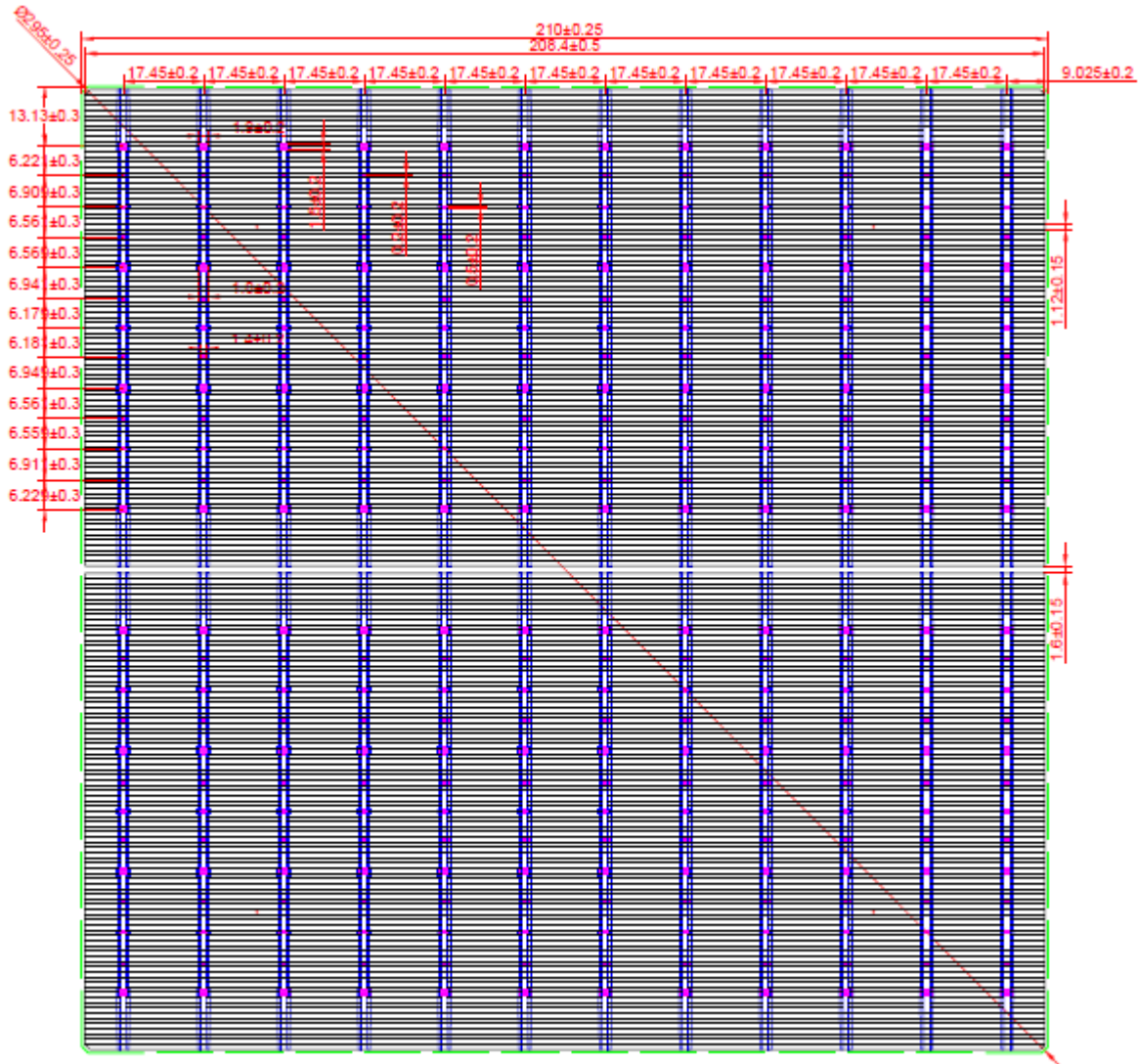


MONOCRISTALLINE SOLAR CELLS 210.00 mm 12BB M12 BIFACIAL SSP - CONFIDENTIAL

Solar cell structure





Dimension: 210mmx210mm±0.25mm, Φ223mm±0.25mm;
Cell Thickness: 155µm±15.5µm

Quality Control

Proper inspection through incoming production, outgoing and packaging
 ±0.1% Efficiency tested within ± 0.1% accuracy



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Electrical Performance

Efficiency	%	23.40	23.30	23.20	23.10	23.00	22.90	22.80	22.70	22.50
Voc	V	0.692	0.691	0.690	0.689	0.688	0.687	0.686	0.685	0.684
Isc	A	18.157	18.131	18.124	18.112	18.095	18.076	18.058	18.033	18.015
Vmpp	V	0.597	0.596	0.595	0.594	0.593	0.592	0.591	0.59	0.589
Impp	A	17.284	17.239	17.194	17.148	17.103	17.057	17.012	16.966	16.845
Pmpp	W	10.32	10.27	10.23	10.19	10.14	10.10	10.05	10.01	9.92

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

Appearance and Structure

Substrate material	P-type mono-crystalline silicon wafer-PERC
Cell thickness	155µm ± 15.5µm
Dimension	210mm*210mm ± 0.25mm
Diagonal	295mm ± 0.25mm
Front (-)	12 bus bars 196 lines, Silicon oxide + blue silicon nitride compound anti reflection coating(PID Free)
Back (+)	186 lines, Silicon oxynitride 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	+(0.06 ± 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%

Anti-PID

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 humidity below 60%, and temperature 20 ± 10 °C. Cells should be sampling inspected again if the storage time over 90 days.