非受控文件

Specification of M182-10BB TOPCON Bifacial Half-cut design Solar Cell

（182.2mm*182.2mm Φ247）

Doc.No.： LW-NM10-BiFi-2076

Revision No.： A

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Revision Record

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Revision	Modification page number	Revised content	Prepared by	Revision Date
A	All	New Edition	LIUQIANG	2023.12.13

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Lightway Energy Technology Co.,Limited

Product Specification	Product Name	LWNM10BB-BiFi-SE-247
	Document Name	Specification of 182mm TOPCON BiFi 10BB Solar Cell
	Document Number	LW-NM10-BiFi-2076
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1.0 Range of Application

This specification is suitable for Lightway Solar 182mm mono 10BB TOPCON Bifacial solar cells and builds up the character and working condition of solar cells.

2.0 Product List

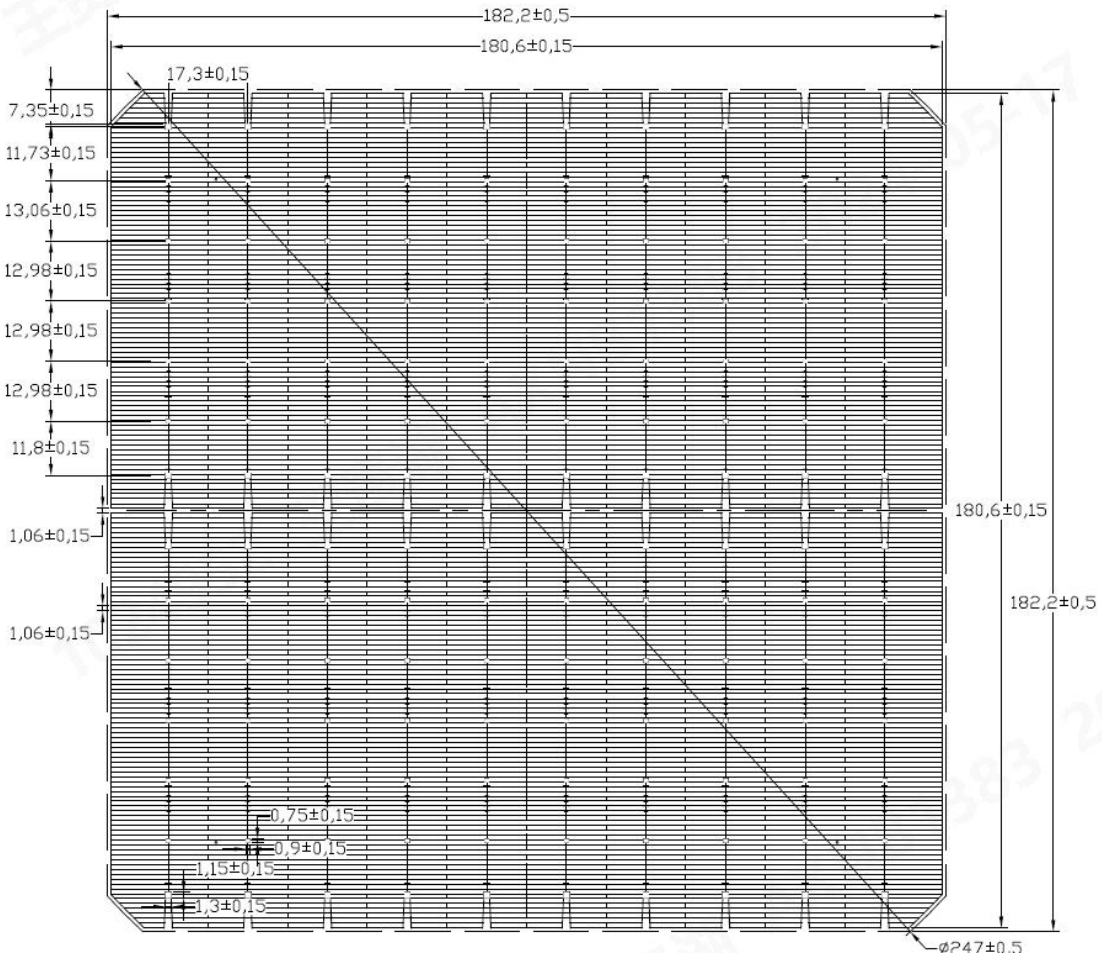
Silicon type	Size	Solar cell thickness
N-Type Mono-crystalline	182.2*182.2±0.5Φ247mm	130μm±13μm

2.1 Cell Product Number: LWNM10BBBiFi247

3.1 Solar Cell Structure

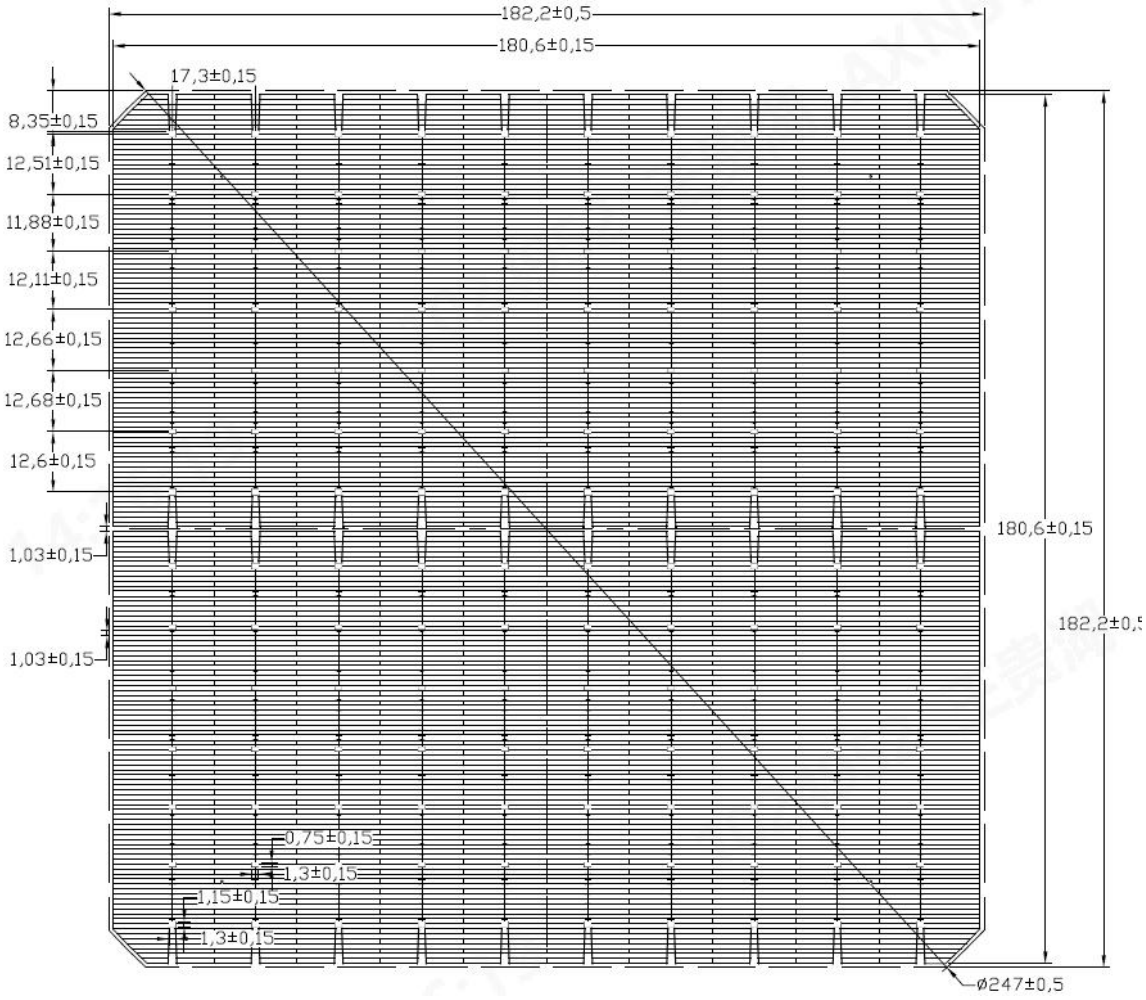
3.1.1 Front electrode pattern

The positive electrode is designed according to the following drawing,the main grid of solar cell consists of ten busbar with a spacing of 17.3mm and a width of 0.05mm.



3.1.2 Back electrode pattern

The back electrodes and electric field are designed according to the following drawings.The back grids of solar cells are ten silver aluminium grids with a distance of 17.3mm and a width 0.05mm.



Parameter Items			Spec.	Tolerance	Unit
Front side	A	Finger quantity	172	N/A	Line
	B	Width of busbar	0.05	±0.035	mm
	C	Distance between busbars	17.3	±0.15	mm
	D	The distance between center line and cell edge	12.35	±0.3	mm
Back side	A	Finger quantity	176	N/A	Line
	B	Width of busbar	0.05	±0.035	mm
	C	Distance between busbars	17.3	±0.15	mm
	D	The distance between center line and cell edge	13.15	±0.3	mm

3.2 Electrical Performance

3.2.1 Front Efficiency

Eff(%)	Pmpp(W)	Umpp(V)	Impp(A)	Uoc(V)	Isc(A)
25.40%	8.38	0.628	13.344	0.729	14.078
25.30%	8.35	0.627	13.312	0.728	14.067
25.20%	8.32	0.626	13.281	0.727	14.066
25.10%	8.29	0.625	13.251	0.726	14.065
25.00%	8.25	0.624	13.204	0.725	14.051
24.90%	8.22	0.623	13.170	0.724	14.043
24.80%	8.19	0.622	13.137	0.723	14.037
24.70%	8.15	0.621	13.089	0.722	14.010
24.60%	8.12	0.620	13.055	0.721	13.998
24.50%	8.09	0.619	13.021	0.720	13.990
24.40%	8.06	0.618	12.987	0.719	13.974
24.30%	8.02	0.617	12.937	0.718	13.949
24.20%	7.99	0.616	12.900	0.717	13.945

3.2.2 Electrical Characteristic under STC Standard

a: Intensity: 1000W/m²

b: Spectrum: AM 1.5G

c: Temperature: 25℃

3.2.3 Temperature Coefficients

Voc: -0.25 %/℃

Isc: +0.045 %/℃

Pm: -0.30 %/℃

3.2.4 Standard solar cells origin

First-class: Fraunhofer

3.3 Visual inspection

3.3.1 Sampling plan: According to GB/T2828.1-2012

3.3.2 Defect standard and sampling level: Major defect-Level III -QALO.5

3.3.3 Inspection Time: Not less than 800LUX,about 5 seconds

3.3.4 Color classification: A range of solar cell is divided into four grade,from Light Blue to Dark Blue based on solar cells visual standard(solar cell color sample)

4.0 Records

N/A

5.0 Attachments

N/A

Note:The specification can apply to Lightway Energy Technology Co.,Limited,Jiangsu Lightway Energy PV Technology Co.,Limited,Jiangxi Lightway Energy PV Technology Co.,Limited,Shenzhen Lightway Energy Technology Co.,Limited,Lightway Technology Development Limited and other related subordinate companies under Lightway Group.