非受控文件

Specification of 210*210mm mono 18BB TOPCON Bifacial Half-cut Pattern Solar Cell

（210*210 ф 295）

Doc.No.： LW-G12-TBiFi-2080

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Revision Record

Doc.No.:LW-G12-TBiFi-2080

Revision	Modification page number	Revised content	Prepared by	Revision Date
A	All	First Edition	LIUQIANG	2024.05.16
A1	Page 5	Adding the efficiency	LIUQIANG	2025.04.22

Lightway Energy Technology Co.,Limited		
Product Specification	Product Name	LWM18BB-TBiFi-SE-295
	Document Name	Specification of 210mm TOPCON BiFi 18BB Solar Cell
	Document Number	LW-G12-TBiFi-2080
	Revision Number	A

1.0 Range of Application

This specification is suitable for Lightway Solar 210*210mm mono 18BB TOPCON Bifacial solar cells and builds up the character and working condition of solar cells.

2.0 Product List

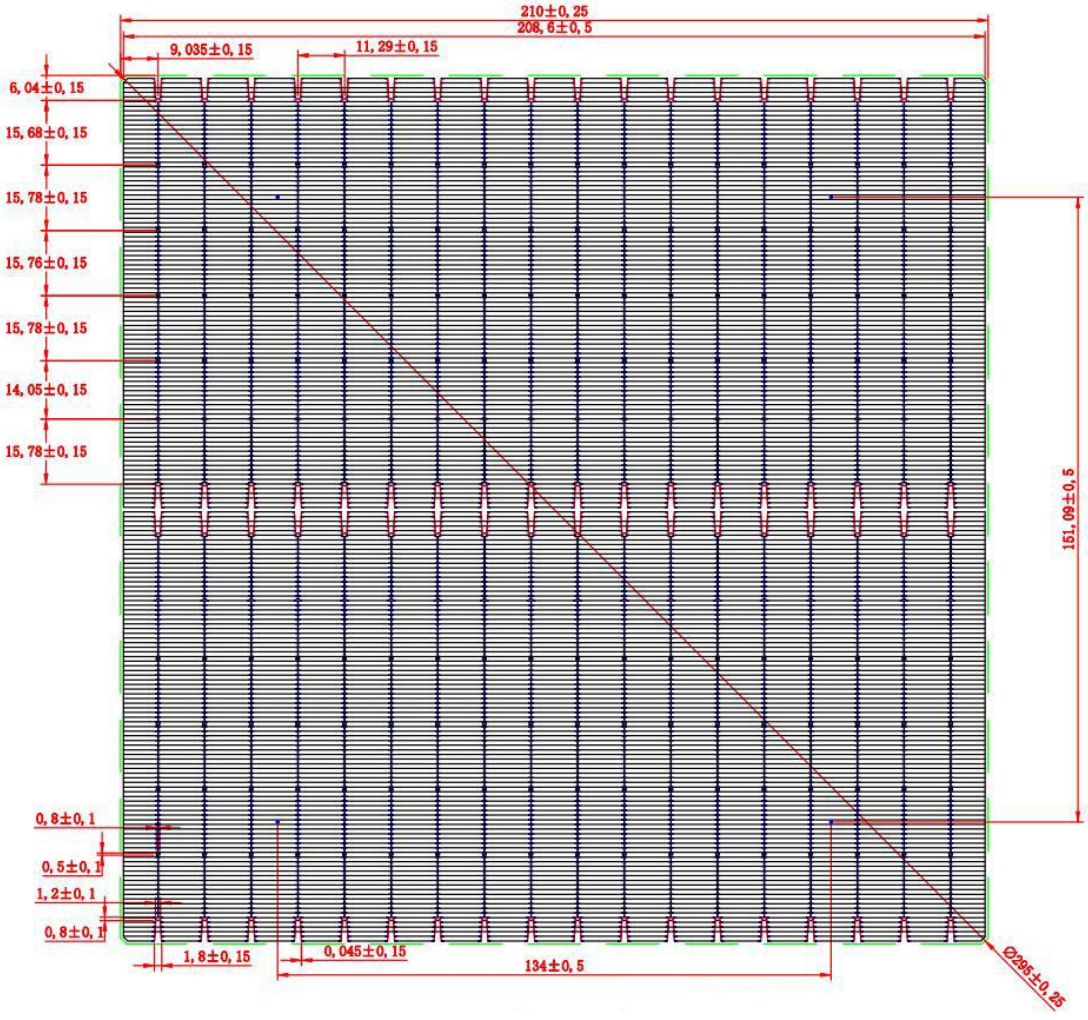
Silicon type	Size	Solar cell thickness
N-Type mono-crystalline	210*210±0.25Φ295mm	130±13μm

2.1 Cell Product Number: LWM18BBTBiFi295

3.1 Solar Cell Structure

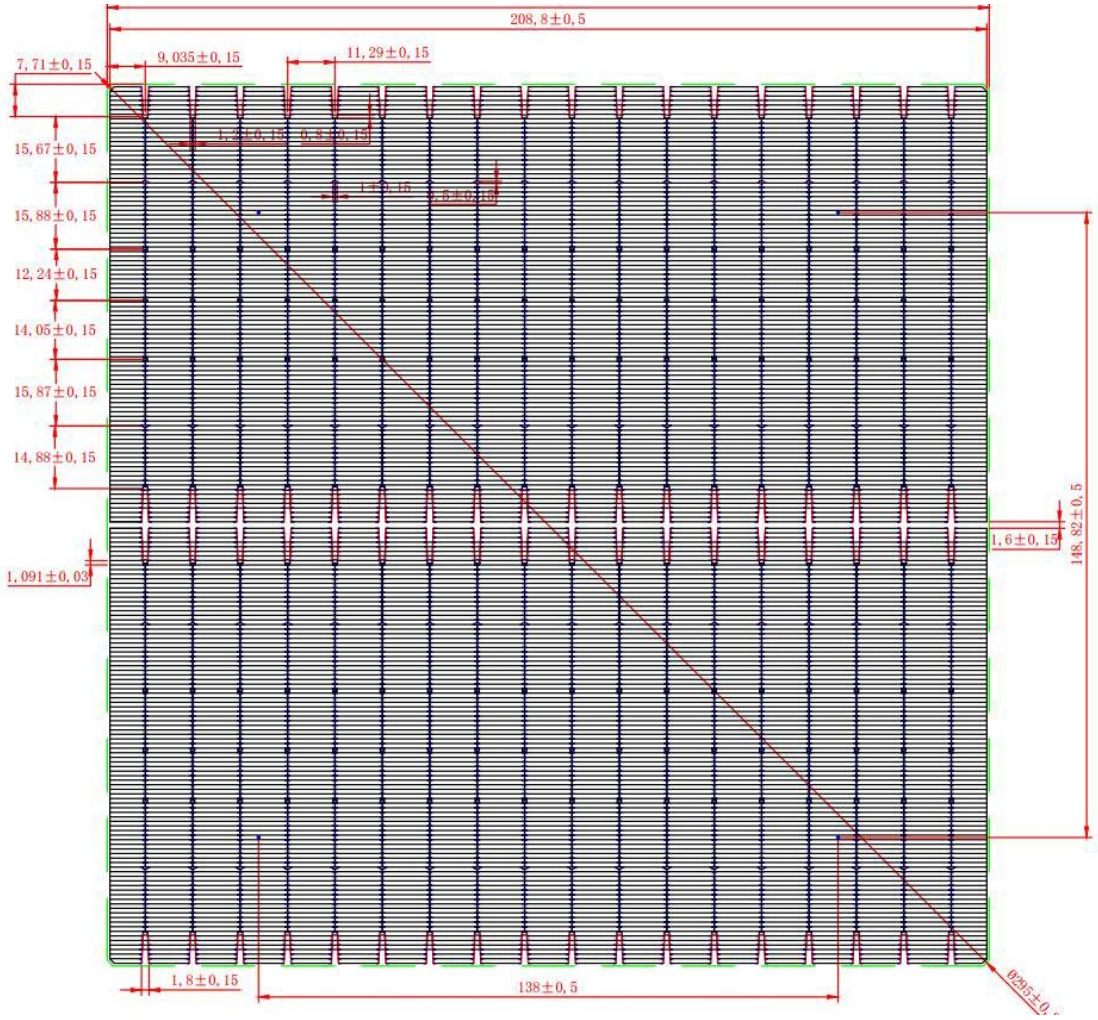
3.1.1 Front electrode pattern

The positive electrode is designed according to the following drawing,the main grid of solar cell consists of eighteen busbars with a spacing of 11.29mm and a width of 0.05mm.



3.1.2 Back electrode pattern

The back electrodes and electric field are designed according to the following drawing.The back grids of solar cells are eighteen sliver-aluminium busbars with a distance of 11.29mm and a width 0.05mm.



Parameter Items			Spec.	Tolerance	Unit
Front side	A	Finger quantity	186	N/A	Line
	B	Width of busbar	0.05	±0.035	mm
	C	Distance between busbars	11.29	±0.15	mm
Back side	A	Finger quantity	192	N/A	Line
	B	Width of busbar	0.05	±0.035	mm
	C	Distance between busbars	11.29	±0.15	mm

3.2 Electrical Performance

3.2.1 Front Efficiency

Eff(%)	Pmpp(W)	Umpp(V)	Impp(A)	Uoc(V)	Isc(A)
25.70%	11.33	0.626	18.136	0.725	18.245
25.60%	11.29	0.625	18.084	0.724	18.229
25.50%	11.24	0.624	18.031	0.723	18.214
25.40%	11.20	0.623	17.983	0.722	18.204
25.30%	11.16	0.622	17.934	0.721	18.189
25.20%	11.11	0.621	17.886	0.720	18.178
25.10%	11.07	0.620	17.839	0.719	18.177
25.00%	11.02	0.620	17.791	0.718	18.174
24.90%	10.98	0.619	17.739	0.717	18.194
24.80%	10.94	0.618	17.688	0.716	18.210
24.70%	10.89	0.617	17.638	0.715	18.199
24.60%	10.85	0.616	17.587	0.714	18.169
24.50%	10.80	0.615	17.535	0.713	18.145

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: -0.27 %/℃
Isc: +0.045 %/℃
Pm: -0.34 %/℃

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.