非受控文件

Specification of M210-12BB (17.45） Bifacial Solar Cell

（210*210 ф 295）

Doc.No.： LW-G12-BiFi-2073

Revision No.： A4

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Revision Record

Doc.No.:LW-G12-BiFi-2073

Revision	Modification page number	Revised content	Prepared by	Revision Date
A	All	New Edition	ZHANGFEI	2021.04.26
A1	Page 3,Page 4	The width of rear busbar	LILEI	2021.10.12
A2	Page 5	Amended efficiency/watt	LIUQIANG	2022.02.22
A3	Page 3,Page 4	Revised patterns of Front side and back side	LIUQIANG	2022.05.23
A4	Page 3	Revised pattern of Front side	LIUQIANG	2023.02.15

Lightway Energy Technology Co.,Limited

Product Specification	Product Name	LWM12BB-BiFi-SE-210
	Document Name	Specification of 210mm Bifacial 12BB Solar Cell
	Document Number	LW-G12-BiFi-2073
	Revision Number	A4

1.0 Range of Application

This specification is suitable for of Lightway Solar 210mm mono 12BB PERC Bifacial solar cells and builds up the character and working condition of solar cells.

2.0 Product List

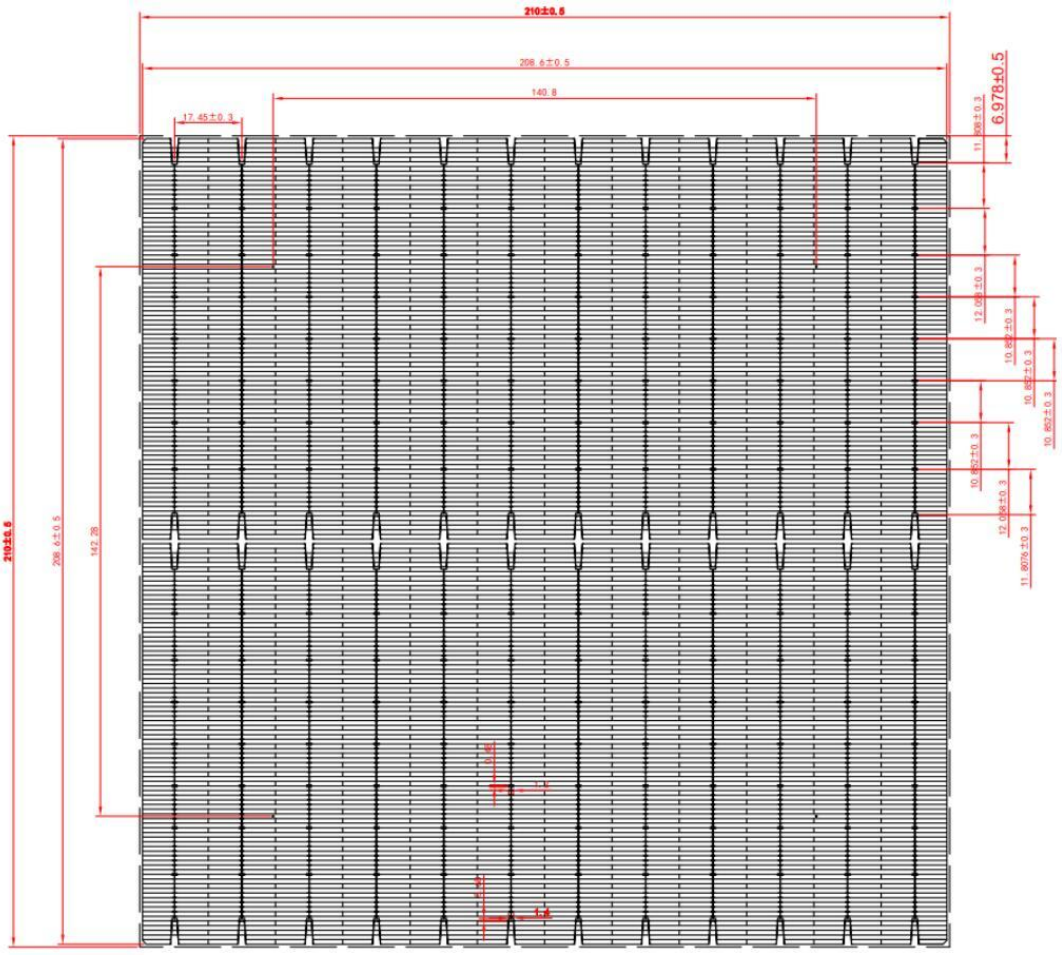
Silicon type	Size	Solar cell thickness
P-Type Mono-crystalline	210*210±0.25Φ295mm	150±15μm

2.1 Cell Product Number: LWM12BBBiFi210

3.1 Solar Cell Structure

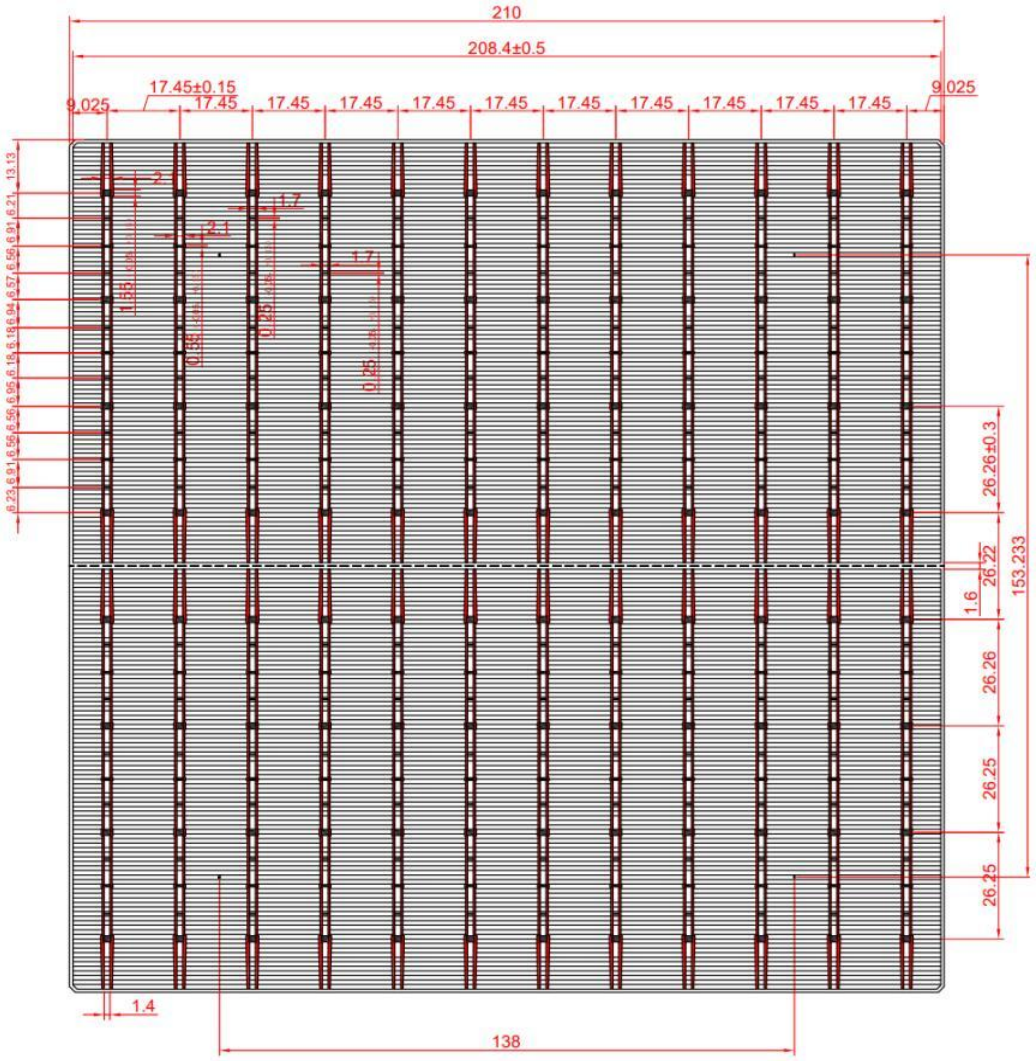
3.1.1 Front electrode pattern

The positive electrode is designed according to the following drawing,the main grid of solar cell consists of twelve busbar with a spacing of 17.45mm and a width of 0.06mm.



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 twelve sliver-aluminium grids with a distance of 17.45mm and a width 1.4mm.



Parameter Items			Spec.	Tolerance	Unit
Front side	A	Finger quantity	174	N/A	Line
	B	Width of busbar	0.06	±0.2	mm
	C	Distance between busbars	17.45	±0.15	mm
	D	The distance between center line and cell edge	9.025	±0.1	mm
Back side	A	Finger quantity	186	N/A	Line
	B	Width of busbar	1.4	±0.2	mm
	C	Distance between busbars	17.45	±0.15	mm
	D	The distance between center line and cell edge	9.025	±0.1	mm

3.2 Electrical Performance

3.2.1 Front Efficiency

Eff(%)	Pmpp(W)	Umpp(V)	Impp(A)	Uoc(V)	Isc(A)
23.50%	10.36	0.598	17.336	0.694	18.335
23.40%	10.32	0.597	17.291	0.693	18.284
23.30%	10.27	0.596	17.245	0.692	18.232
23.20%	10.23	0.595	17.195	0.691	18.180
23.10%	10.18	0.594	17.148	0.690	18.129
23.00%	10.14	0.593	17.088	0.689	18.077
22.90%	10.10	0.592	17.043	0.688	18.009
22.80%	10.05	0.591	16.997	0.687	17.956
22.70%	10.00	0.590	16.951	0.686	17.904
22.60%	9.97	0.589	16.905	0.685	17.851
22.50%	9.92	0.588	16.859	0.684	17.798
22.40%	9.88	0.587	16.813	0.683	17.745

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: -0.30%/℃

Isc: +0.06%/℃

Pm: -0.39%/℃

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.