非受控文件

Specification of M166-9BB（18）

Bifacial Half-Cut Pattern Solar Cell

（166*166 ф 223）

Doc.No.： LW-M6-BiFi-2070

Revision No.： A3

Prepared Dept： Process Department

Effective Date： 2022.11.21

Prepared by	LIUQIANG	Checked by	LIHAIPING	Approved by	ZHANGQING

Revision Record

Doc.No.:LW-M6-BiFi-2070

Revision	Modification page number	Revised content	Prepared by	Revision Date
A	All	New Edition	DENGSHIWEN	2020.10.19
A1	Page 3,Page 4	Unify Cell Thickness	LIUQIANG	2021.03.17
A2	Page 5	Adding three efficiency bin	LIUQIANG	2021.07.23
A3	Page 3,Page 4	Unify Cell Thickness etc	LIUQIANG	2022.11.21

非受控文件

Product Specification	Product Name	LWM9BB-BiFi-SE-166
	Document Name	Specification of 166mm Bifacial 9BB Solar Cell
	Document Number	LW-M6-BiFi-2070
	Revision Number	A3

1.0 Range of Application

This specification is suitable for of Lightway Solar 166mm mono 9BB P-Type Bifacial solar cells and builds up the character and working condition of solar cells.

2.0 Product List

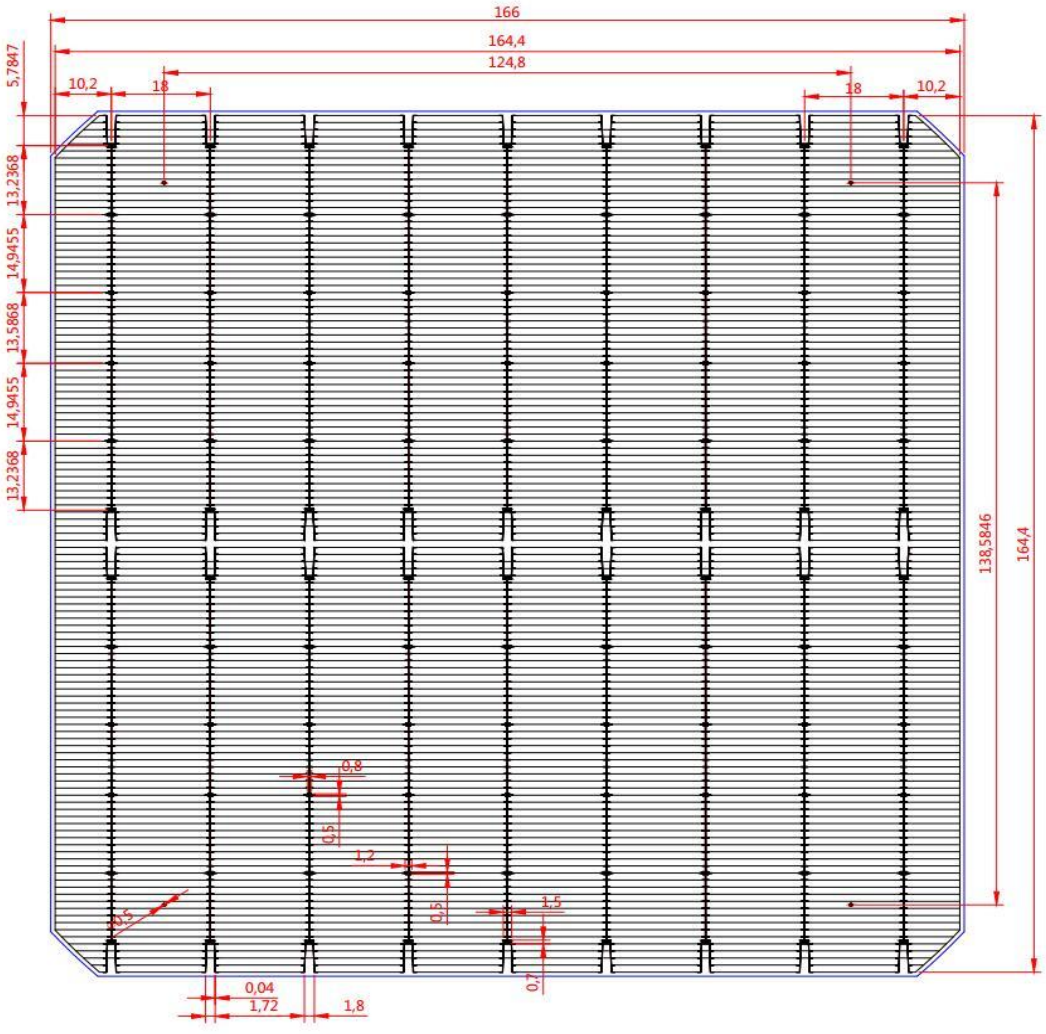
Silicon type	Size	Solar cell thickness
Mono-crystalline	166*166±0.25Φ223mm	160±20μm

2.1 Cell Product Number: LWM9BBBiFi166

3.1 Solar Cell Structure

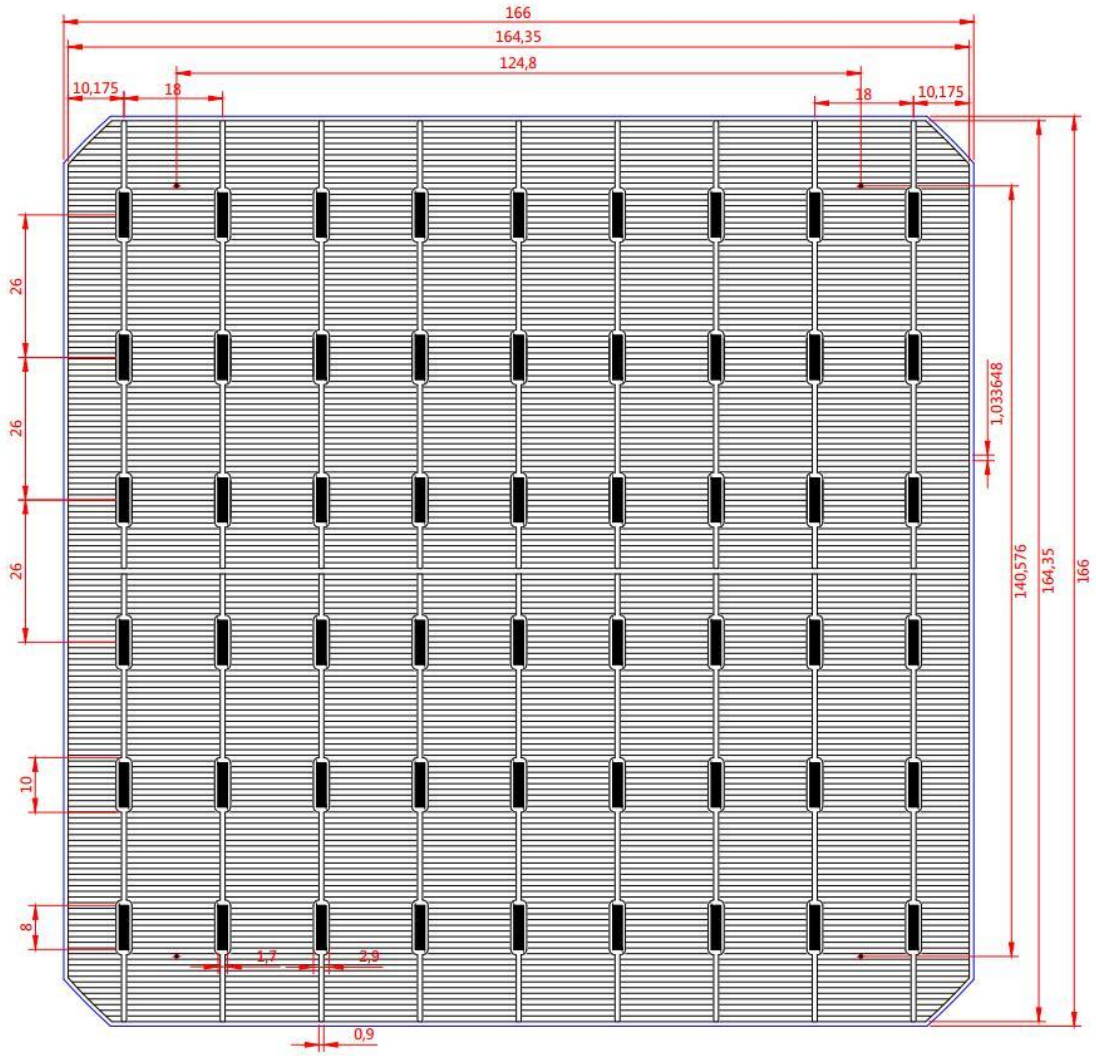
3.1.1 Front electrode pattern

The positive electrode is designed according to the following drawing,the main grid of solar cell consists of nine busbar with a spacing of 18mm and a width of 0.07mm.



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 nine silver-aluminium grids with a distance of 18mm and a width 1.7mm.



Parameter Items			Spec.	Tolerance	Unit
Front side	A	Finger quantity	122	N/A	Line
	B	Width of busbar	0.07	±0.02	mm
	C	Distance between busbars	18	±0.15	mm
	D	The distance between center line and cell edge	10.20	±0.3	mm
Back side	A	Finger quantity	160	N/A	Line
	B	Width of busbar	1.7	±0.1	mm
	C	Distance between busbars	18	±0.15	mm
	D	The distance between center line and cell edge	10.175	±0.3	mm

3.2 Electrical Performance

3.2.1 Front Efficiency

Eff(%)	Pmpp(W)	Umpp(V)	Impp(A)	Uoc(V)	Isc(A)
23.30%	6.37	0.590	10.827	0.690	11.285
23.20%	6.35	0.589	10.799	0.689	11.266
23.10%	6.32	0.588	10.770	0.688	11.245
23.00%	6.30	0.587	10.742	0.687	11.225
22.90%	6.27	0.586	10.713	0.686	11.204
22.80%	6.25	0.585	10.685	0.685	11.184
22.70%	6.22	0.584	10.656	0.684	11.164
22.60%	6.20	0.583	10.627	0.683	11.143
22.50%	6.17	0.582	10.599	0.682	11.122
22.40%	6.14	0.581	10.570	0.681	11.101
22.30%	6.11	0.580	10.541	0.680	11.080
22.20%	6.09	0.579	10.511	0.679	11.062

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: -0.36%/℃

Isc: +0.04%/℃

Pm: -0.38%/℃

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 grades,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.