



Test Report

Report No: BSTDG2230422477602CR

Date: Apr. 07, 2023

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Applicant : Ningbo Sun Earth East Solar Co.,Ltd

Address : Room 01, Building 9,N0.9 Chenshan West Road, Xiaogang Sub-district,Beilun District,Ningbo 315803,P.R.China

Manufacturer : Ningbo Sun Earth East Solar Co.,Ltd

Address : Room 01, Building 9,N0.9 Chenshan West Road, Xiaogang Sub-district,Beilun District,Ningbo 315803,P.R.China

The following sample(s) was /were submitted and identified on behalf of the clients as:

Sample Name : Crystalline Silicon PV Modules

Model : DXM7-72H xxxW (xxx=410-455,in steps of 5,144 cells)
DXM5-72P xxxW (xxx=180-220,in steps of 5,72 cells)
DXM6-72P xxxW (xxx=330-405,in steps of 5,72 cells)
DXM6-60P xxxW (xxx=275-335,in steps of 5,60 cells)
DXM6-36P xxxW (xxx=165-200,in steps of 5,36 cells)
DXM5-36P xxxW (xxx=090-110,in steps of 5,36 cells)
DXP6-72P xxxW (xxx=280-350,in steps of 5,72 cells)
DXP6-60P xxxW (xxx=230-290,in steps of 5,60 cells)
DXP6-36P xxxW (xxx=140-175,in steps of 5,36 cells)
DXM6-72G xxxW (xxx=380-415,in steps of 5,72 cells)
DXM6-60G xxxW (xxx=320-345,in steps of 5,60 cells)
DXM6-72H xxxW (xxx=380-415,in steps of 5,144 cells)
DXM6-60H xxxW (xxx=320-345,in steps of 5,120 cells)
DXM7-60H xxxW (xxx=345-375,in steps of 5,120 cells)
DXM8-72H xxxW (xxx=475-585,in steps of 5,144 cells)
DXM8-66H xxxW (xxx=435-535,in steps of 5,132 cells)
DXM8-60H xxxW (xxx=400-485,in steps of 5,132 cells)
DXM8-54H xxxW (xxx=400-435, in steps of 5, 108 cells)
DXM8-72HBG xxxW (xxx=475-585, in steps of 5, 144 cells)
DXM8-66HBG xxxW (xxx=435-535, in steps of 5, 132 cells)
DXM8-60HBG xxxW (xxx=400-485, in steps of 5, 120 cells)
DXM8-54HBG xxxW (xxx=400-435, in steps of 5, 108 cells)

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Dongguan BST Testing Co., Ltd.

4/F., No.11, Chaomei Industrial Park, No.1445, Donghai Road, Yongan Community, Yantian Subdistrict, Yantian District, Shenzhen, Guangdong, China

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Sample Received Date : Apr. 03, 2023
Testing Period : Apr. 03, 2023 To Apr. 07, 2023
Test Requested : Selected test (s) in the selected parts as requested by client with the RoHS 2 Directive 2011/65/EU Annex II (EU) 2015/863 as last amended by Directive (EU) 2017/2102.
Test Method : Please refer to next page(s).
Test Result : Please refer to next page(s).

Signed for and on behalf of



Richard LWO/Approved Signatory

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Test Content:

Test Item(s)	Test Method	Reference	Unit	Limit	MDL
Cadmium(Cd)	IEC 62321-5:2013	ICP-OES	mg/kg	100	2
Lead(Pb)	IEC 62321-5:2013	ICP-OES	mg/kg	1000	2
Mercury(Hg)	IEC 62321-4:2013+AMD1:2017	ICP-OES	mg/kg	1000	2
Hexavalent Chromium(CrVI) (Metal)	IEC 62321-7-1:2015	UV-Vis	µg/cm ²	0.13	0.1
Hexavalent Chromium(CrVI) (Nonmetal)	IEC 62321-7-2:2017	UV-Vis	mg/kg	1000	8
PBBs(Next form)	IEC 62321-6:2015	GC-MS	mg/kg	1000	5
PBDEs(Next form)	IEC 62321-6:2015	GC-MS	mg/kg	1000	5
Dibutyl Phthalate(DBP)	IEC 62321-8:2017	GC-MS	mg/kg	1000	30
Butyl benzyl phthalate (BBP)	IEC 62321-8:2017	GC-MS	mg/kg	1000	30
Di-(2-ethylhexyl) Phthalate(DEHP)	IEC 62321-8:2017	GC-MS	mg/kg	1000	30
Diisobutyl phthalate (DIBP)	IEC 62321-8:2017	GC-MS	mg/kg	1000	30
PBBs		PBDEs			
Monobromobiphenyl	Hexabromobiphenyl	Monobromodiphenyl ether	Hexabromodiphenyl ether		
Dibromobiphenyl	Heptabromobiphenyl	Dibromodiphenyl ether	Heptabromodiphenyl ether		
Tribromobiphenyl	Octabromobiphenyl	Tribromodiphenyl ether	Octabromodiphenyl ether		
Tetrabromobiphenyl	Nonabromobiphenyl	Tetrabromodiphenyl ether	Nonabromodiphenyl ether		
Pentabromobiphenyl	Decabromobiphenyl	Pentabromodiphenyl ether	Decabromodiphenyl ether		

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No.	Description	Name
1	Plastic	Rear cover
2	Plastic	Encapsulation material (EVA)
3	Metal	Aluminum alloy
4	Nonmetallic	Adhesive (frame)
5	Nonmetallic	Solar cell supplier
6	Plastic	Serial/parallel connection of cells
7	Plastic	Cell connectors
8	Plastic	String connectors
9	Nonmetallic	Fluxing agent
10	Nonmetallic	Soldering material
11	Plastic	Fixing Tape
12	Plastic	Insulation Layer
13	Plastic	Junction box
14	Plastic	Cable
15	Plastic	Connectors
16	Nonmetallic	Bypass-Diode
17	Nonmetallic	Adhesive
18	Nonmetallic	Potting material

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Test Results:

Test Item(s)	No.1	No.2	No.3	No.4	No.5
Cadmium (Cd)	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	N.D.	N.D.	N.D.	N.D.	N.D.
Hexavalent Chromium (CrVI)	N.D.	N.D.	N.D.	N.D.	N.D.
PBBs	N.D.	N.D.	N.D.	--	N.D.
PBDEs	N.D.	N.D.	N.D.	--	N.D.
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	--	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	--	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	--	N.D.
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	--	N.D.
Test Item(s)	No.6	No.7	No.8	No.9	No.10
Cadmium (Cd)	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	N.D.	N.D.	N.D.	N.D.	N.D.
Hexavalent Chromium (CrVI)	N.D.	N.D.	N.D.	N.D.	N.D.
PBBs	N.D.	N.D.	N.D.	N.D.	N.D.
PBDEs	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.

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Test Item(s)	No.11	No.12	No.13	No.14	No.15
Cadmium (Cd)	N.D.	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)	N.D.	N.D.	N.D.	N.D.	N.D.
Hexavalent Chromium (CrVI)	N.D.	N.D.	N.D.	N.D.	N.D.
PBBs	N.D.	N.D.	N.D.	N.D.	N.D.
PBDEs	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.	N.D.	N.D.
Test Item(s)	No.16	No.17	No.18		
Cadmium (Cd)	N.D.	N.D.	N.D.		
Lead (Pb)	N.D.	N.D.	N.D.		
Mercury (Hg)	N.D.	N.D.	N.D.		
Hexavalent Chromium (CrVI)	N.D.	N.D.	N.D.		
PBBs	N.D.	N.D.	N.D.		
PBDEs	N.D.	N.D.	N.D.		
Dibutyl Phthalate (DBP)	N.D.	N.D.	N.D.		
Butyl benzyl phthalate (BBP)	N.D.	N.D.	N.D.		
Di-(2-ethylhexyl) Phthalate(DEHP)	N.D.	N.D.	N.D.		
Diisobutyl phthalate (DIBP)	N.D.	N.D.	N.D.		

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Note:

1. mg/kg= ppm
2. N.D.= Not Detected(<MDL)
3. MDL = Method Detection Limit
4. -- = No Testing
5. when Cr(VI) in a sample is detected below the 0.10 $\mu\text{g}/\text{cm}^2$ LOQ (limit of quantification), the sample is considered to be negative for Cr(VI). Since Cr(VI) may not be uniformly distributed in the coating even within the same sample batch, a "grey zone" between 0.10 $\mu\text{g}/\text{cm}^2$ and 0.13 $\mu\text{g}/\text{cm}^2$ has been established as "inconclusive" to reduce inconsistent results due to unavoidable coating variations. In this case, additional testing may be necessary to confirm the presence of Cr(VI). When Cr(VI) is detected above 0.13 $\mu\text{g}/\text{cm}^2$, the sample is considered to be positive for the presence of Cr(VI) in the coating layer. unavoidable coating variations may influence the determination Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

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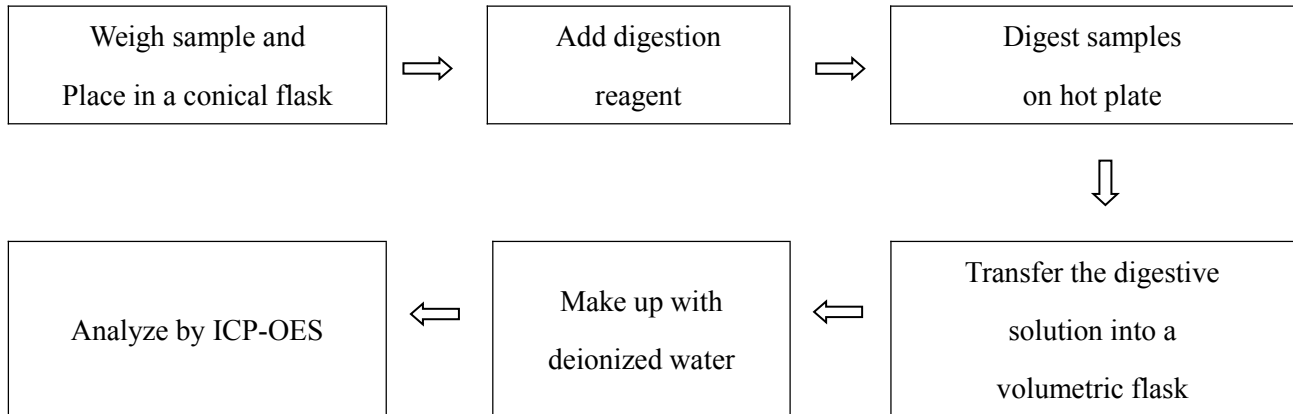
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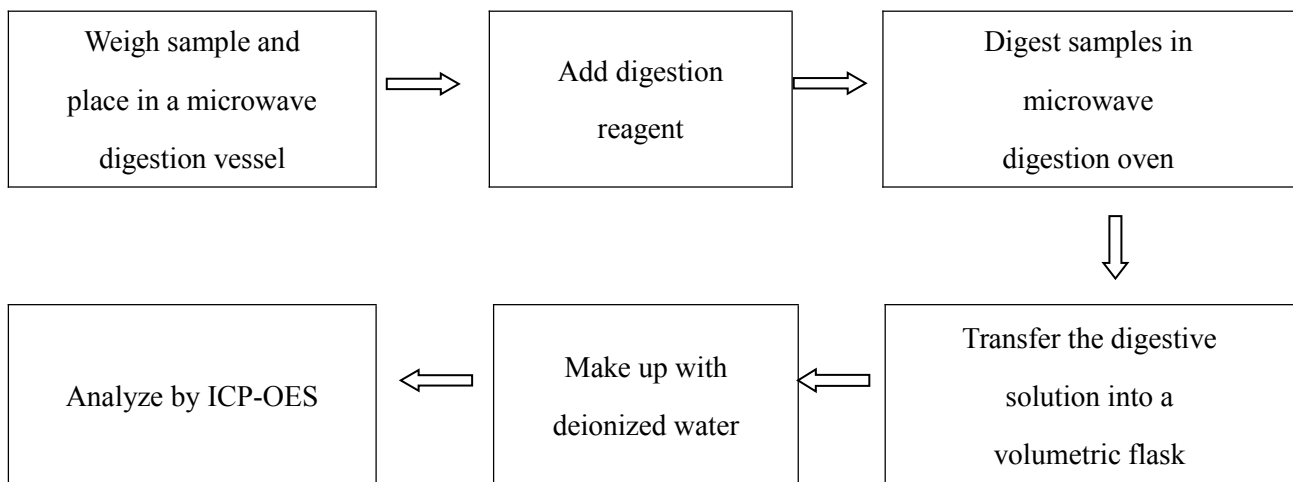
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Test Process:

1. Test for Cd/Pb Content



2. Test for Hg Content



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Test Report

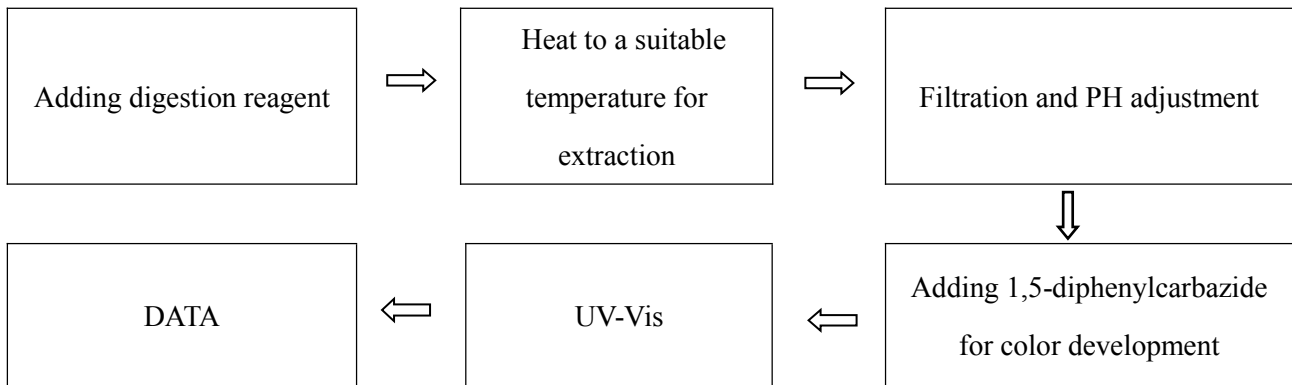
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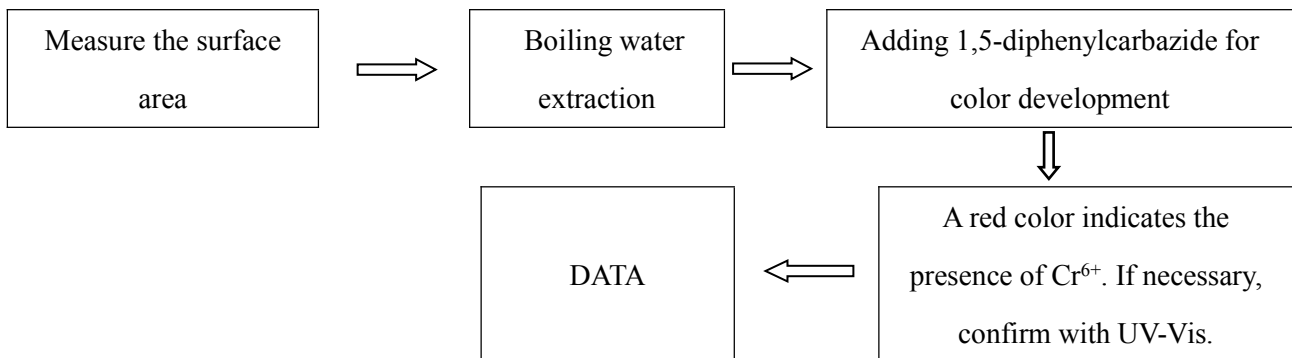
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3. Test for Chromium (VI) Content

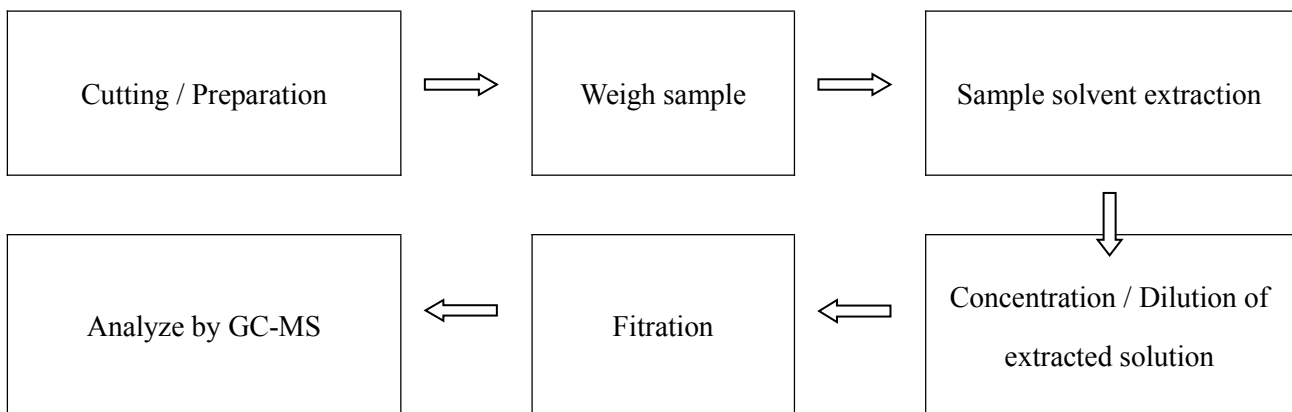
Nonmetal material



Metal material



4. Test for DBP, BBP, DEHP, DIBP, PBB, PBDE Content



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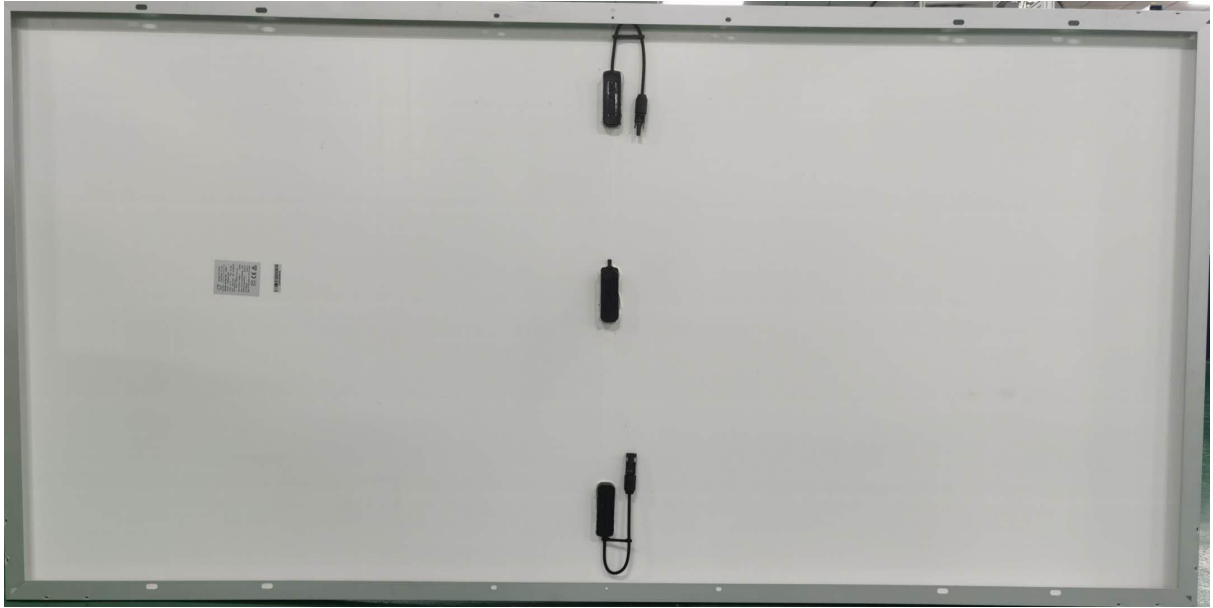
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EUT Photos



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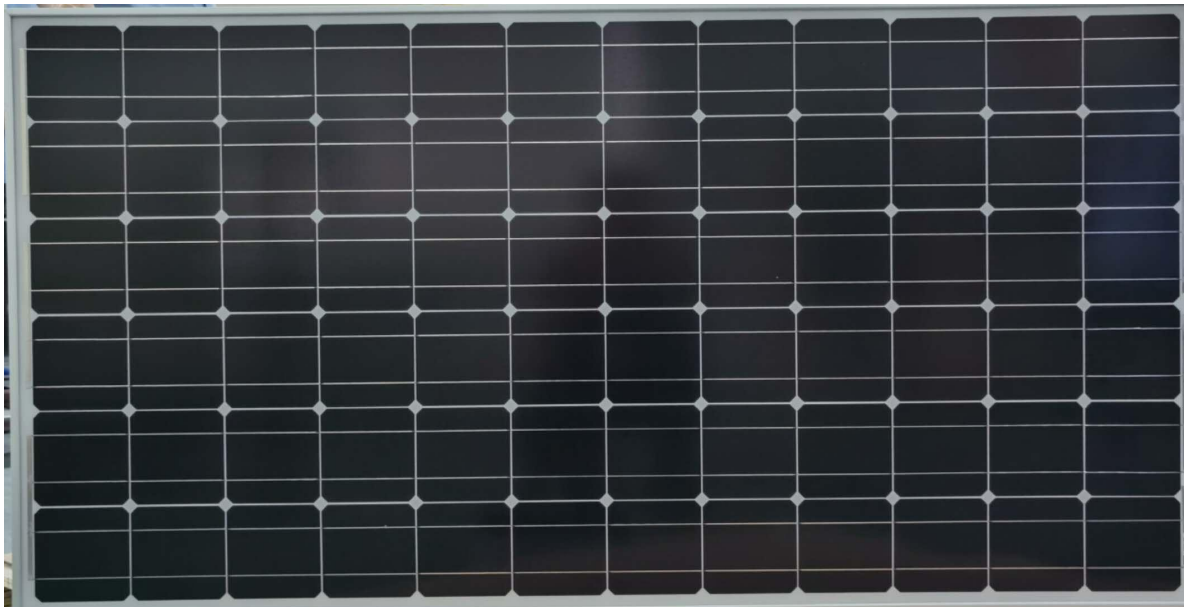


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