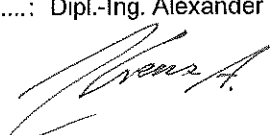

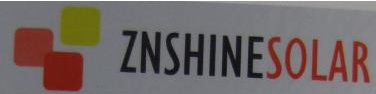




TEST REPORT	
IEC 61701:2011	
TÜV SÜD Test report for salt mist corrosion testing of photovoltaic (PV) modules	
Report reference No.....	70.406.11.103.04 part 1 of 2
Date of issue.....	2012-04-09
Project handler.....	Alexander Krenz
Testing laboratory.....	Jiangsu TÜV Product Service Ltd., Shanghai Branch
Address.....	No. 88 Heng Tong Road, 200070 Shanghai, P.R. China
Testing location .....	See page 3
Client.....	ZN Shine PV-tech Co., Ltd.
Client number.....	73899
Address.....	No. 1 Zhixi Industry Zone 213251, Jintan Jiangsu, P.R. China
Contact person.....	Yang Jian
Standard .....	This TÜV SÜD test report form is based on the following requirements: IEC 61701:2011
TRF originated by .....	TÜV SÜD Product Service GmbH, Dipl.-Ing. Alexander Krenz
Copyright blank test report.....	This test report is based on the content of the standard (see above). The test report considered selected clauses of the a.m. standard(s) and experience gained with product testing. It was prepared by TÜV SÜD Product Service GmbH.  TÜV SÜD Group takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.
Test procedure .....	<input type="checkbox"/> GS, <input type="checkbox"/> TÜV Mark, <input type="checkbox"/> EU-Directive, <input type="checkbox"/> without certification
Non-standard test method .....	N/A
National deviations .....	N/A
Number of pages (Report) .....	19
Number of pages (Attachments).....	0
Compiled by..... (+ signature)	Approved by .... : Wang Jianhui (+ signature)
 	



Product Service

Test sample.....	ZX190(37)MS	
Type of test object .....	Mono-crystalline Silicon Photovoltaic (PV) Module(s)	
Trademark .....		
Model and/or type reference .....	ZX190(37)MS	
Rating(s) .....	See label	
Manufacturer.....	ZN Shine PV-tech Co., Ltd.	
Manufacturer number.....	73899	
Address .....	No. 1 Zhixi Industry Zone 213251,Jintan Jiangsu, P.R. China	
Sub-contractors/ tests (clause).....	See under summary of testing. Page 3	
Name.....	See under summary of testing. Page 3	
Order description... ..	<input checked="" type="checkbox"/>	Complete test according to TRF
	<input type="checkbox"/>	Partial test according to manufacturer's specifications
	<input type="checkbox"/>	Preliminary test
	<input type="checkbox"/>	Spot check
Date of order.....	2011-11-15	
Date of receipt of test item .....	2011-12-28	
Date(s) of performance of test.....	2012-01-03 – 2012-03-14	
Test item particulars: according to standard		
Attachments: N/A		



Summary of testing:	
<p><b>Tests performed (name of test and test clause):</b></p> <p><b>Initial measurements:</b></p> <ul style="list-style-type: none"> <li>Preconditioning</li> <li>MST 01: Visual inspection</li> <li>10.2: Maximum power determination</li> <li>MST 16: Dielectric withstand test</li> <li>10.15: Wet leakage current test</li> <li>MST 13: Ground continuity test</li> </ul> <p><b>Salt mist corrosion test</b></p> <p>in accordance with IEC 60068-2-52 for Severity level 5</p> <p><b>Final measurements:</b></p> <ul style="list-style-type: none"> <li>MST 01: Visual inspection</li> <li>10.2: Maximum power determination</li> <li>MST 16: Dielectric withstand test</li> <li>10.15: Wet leakage current test</li> <li>MST 13: Ground continuity test</li> <li>Bypass diode functionality test</li> </ul>	<p><b>Testing location:</b></p> <p>Photovoltaik-Institut Berlin AG                  Wrangelstraße 100                  D-10997 Berlin, Germany                  (Performed initial and final measurements)</p> <p>TechnoLab                  Am Borsigturm 46                  D-13507 Berlin, Germany                  (Performed salt mist corrosion test)</p>

**Summary of compliance with National Differences:**  
 N/A

**Copy of marking plate:**

**ZNSHINESOLAR**

Model Type	ZX190(37)MS
Maximum Power(Pmax)	190W(0~+3%)
Maximum Power Voltage(Vmp)	37.1V
Maximum Power Current(Imp)	5.15A
Open Circuit Voltage(Voc)	44.85V
Short Circuit Current(Isc)	5.54A
Maximum System Voltage	1000V
Maximum Series Fuse	10A
Cell Technology	Si mono
Standard Test Condition(E=1000W/m <sup>2</sup> Tc=25°C,AM=1.5)	
Nominal Operating Cell Temperature(NOCT)47±2°C	
For field connections,use minimum No.11 AWG copper wires	
Insulated for a minimum 90°C	
Weight/Dimension 16kg/1580*808*45mm	
	Hazardous electricity can shock, burn, or cause death. Do not touch terminals.
	Module Application:Class A
#1,Zhixi Industry Zone, Jintan, Jiangsu, P.R. China 213251	
<a href="http://www.znshinesolar.com">http://www.znshinesolar.com</a>	



<b>Test item particulars</b> ..... :	
Accessories and detachable parts included in the evaluation .....	N/A
Option included .....	N/A
<b>Possible test case verdicts:</b>	
- test case does not apply to the test object..... :	N/A
- test object does meet the requirement..... :	P (Pass)
- test object does not meet the requirement .....	F (Fail)
<b>Abbreviations used in the report:</b>	
STC – Standard Test Conditions	SMC – Salt Mist Corrosion
Imp – Maximum power current	Vmp – Maximum power voltage
Isc – Short circuit current	Voc – Open circuit voltage
Pmp – Maximum power	WL – Wet leakage current
Pr – Relative power	
<b>General remarks:</b>	
<p>The test results presented in this report relate only to the object tested.                  This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.                  "(see Enclosure #)" refers to additional information appended to the report.                  "(see appended table)" refers to a table appended to the report.</p> <p>Throughout this report a point is used as the decimal separator.                  Summary of contents provided on the last page of this report.</p>	
<b>General product information and considerations:</b>	
<b>Product Electrical Ratings:</b>	
Type or model number	ZX190(37)MS
Voc (Vdc)	44.85
Vmp (Vdc)	37.1
Imp (Adc)	5.15
Isc (Adc)	5.54
Pmp (W)	190
Deviation of Pmp at STC or Minimum value of Pmp (for thin film module) (%)	0 ~ + 3
Maximum system voltage (V)	1000Vdc
Maximum over-current protection rating (A)	10
Application Class	A



Information for testing sample:

Sample #	Type	Series number
1	ZX190(37)MS	1226255128290784
2	ZX190(37)MS	1226255128290778
3	ZX190(37)MS	1226255128290783_reference

<b>Description of module construction: (Manufactories and part numbers, unless otherwise specified)</b>	
Sample .....	Random sampling from production <input checked="" type="checkbox"/> Prototype submitted by client <input type="checkbox"/>
<b>Module</b>	
Front Cover.....	Tempered glass; t= 3.2mm; Xinyi PV Products (Anhui) Holdings Ltd.
Rear Cover .....	PET; type: VPEW; t= 50/100/120; Dai Nippon Printing Co., Ltd.
Encapsulation material.....	EVA; type: SV-15296; Shenzhen Sveck Technology Co., Ltd.
Frame.....	Anodized aluminum alloy, 6063-T5; Changzhou Yihe Aluminum Industry Co., Ltd.
Dimensions (l x w x h) [mm] .....	1580 x 808 x 45
Module area [m <sup>2</sup> ].....	1.277
Adhesives (junction box) .....	Type: SMG533; Guangzhou Baiyun Chemical Industry Co., Ltd.
Minimum distance between current-carrying parts and module edge [mm]	18mm
<b>Cell</b>	
Cell (include type) .....	Mono-Si
Cells (l x w) [mm] .....	125 x 125
Cell thickness [μm].....	200 ± 30
Cell area [cm <sup>2</sup> ] .....	154.8
Number of cells.....	72
<b>Components</b>	
Cells per bypass diode.....	24
Type of bypass diode.....	10SQ050; Yangzhou Yangjie Electronic Technology Co., Ltd.
No. of bypass diodes .....	3
Cell- and string connectors.....	Cell: 1.8 x 0.2mm; string 5 x 0.25mm; JiangSu Youngs Photovoltaic Technology Co., Ltd.
Junction box .....	Ningbo Free Trade Zhonghuan Electronic Technology Co., Ltd.; PV- ZH008



Cable..... :	Ningbo Zhonghuan Sunter PV Technology Co. Ltd.; PV1-F; 4mm <sup>2</sup>
Connectors..... :	Ningbo Free Trade Zhonghuan Electronic Technology Co., Ltd; PV- ZH202
Adhesives (frame)..... :	Type: SMG533; Guangzhou Baiyun Chemical Industry Co., Ltd.
Potting material (junction box)..... :	N/A
<b><u>Receiver</u></b>	
Type..... :	N/A
Dimension (l x w x h) [mm]..... :	N/A
Front Cover..... :	N/A
Rear Cover..... :	N/A
Encapsulation material..... :	N/A
<b><u>Mirror</u></b>	
Type..... :	N/A
Dimension (l x w) [mm]..... :	N/A
<b><u>Other</u></b>	
Others..... :	N/A

IEC 61701: 2011			
Clause	Requirement + Test	Result--Remark	Verdict
<b>3</b>	<b>Samples</b>		
	– Three identical samples of the model of PV module or assembly of interest must be subjected to any of the testing sequences included in Figures 1, 2, or 3, depending on the PV technology considered, namely crystalline silicon, thin-film or concentrator photovoltaic (CPV) respectively.	Three samples evaluated	P
	– Full-size sample or representative sample	Full size samples	P
	– PV module provided with means for grounding then they constitute a part of the test sample.	With grounding	P
<b>4</b>	<b>Test procedures</b>		
4.1	– All tests included in Figures 1, 2 or 3, except the bypass diode functionality test, are fully described in the IEC standards.	Performed accordingly	P
4.2	Bypass Diode Functionality Test	Performed accordingly	P
<b>5</b>	<b>Preconditioning</b>		
	– All test samples must be preconditioned with either global or direct normal sunlight according to the specifications given in the applicable Design Qualification and Type Approval IEC standard applicable.	Performed accordingly	P
<b>6</b>	<b>Initial Measurements</b>		
6.1	Crystalline silicon		—
	– Tests according to IEC 61215		—
	a) 10.2: Maximum power determination	See table 6-b)	P
	b) 10.15: Wet leakage current test	See table 6-d)	P
	– Tests according to IEC 61730-2		—
	c) MST 01: Visual inspection	See table 6-a)	P
	d) MST 13: Ground continuity test	See table 6-e)	P
	e) MST 16: Dielectric withstand test	See table 6-c)	P
6.2	Thin-film technologies		N/A
	– Tests according to IEC 61646		—
	a) 10.2: Maximum power determination	See table 6-b)	N/A
	b) 10.15: Wet leakage current test	See table 6-d)	N/A
	– Tests according to IEC 61730-2		
	c) MST 01: Visual inspection	See table 6-a)	N/A



IEC 61701: 2011			
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Clause	Requirement + Test	Result--Remark	Verdict
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	d) MST 13: Ground continuity test	See table 6-e)	N/A
	e) MST 16: Dielectric withstand test	See table 6-c)	N/A
6.3	Concentrator photovoltaic (CPV) modules		
	– Tests according to IEC 62108		
	a) 10.1: Visual inspection	See table 6-a)	N/A
	b) 10.2: Electrical performance measurement	See table 6-b)	N/A
	c) 10.3: Ground path continuity test	See table 6-e)	N/A
	d) 10.4: Electrical insulation test	See table 6-c)	N/A
	e) 10.5: Wet insulation test	See table 6-d)	N/A

7	Salt mist corrosion test		
	Apply to the test samples under study the salt mist test as described in IEC 60068-2-52 following the general conditions, apparatus, characteristics of the salt solution, severities and other specifications included.	See table 7	P
	The severity of the salt mist test shall be chosen according to the atmospheric conditions prevailing in the place where the installation of the PV modules is intended.	Severity level 5	P
	Severity (2) is not suitable for PV modules as testing conditions are too weak (it is intended for products exposed to corrosive environments from time to time that are normally protected by an enclosure) and should be avoided when applying this Standard.		N/A
	During testing the face of the PV module normally exposed to solar irradiance shall be inclined 15° to 30° from vertical inside the salt fog chamber.	Inclination of 30°C respected. See photo documentation	P
	The module can be placed vertically in the humidity chamber used for the humidity storage portion of the test.	Performed accordingly	P

8	Cleaning and recovery		
	– After the salt mist test all samples must be washed to remove the adherent salt using running tap water for a maximum time of 5 minutes per square meter of area of the sample.	Performed accordingly	P
	– The temperature of the water used for washing shall not exceed 35 °C	Performed accordingly	P
	– During cleaning or drying the use of cloths, gauzes or any other woven material shall be avoided and no scraping is allowed	Performed accordingly	P





IEC 61701: 2011			
Clause	Requirement + Test	Result--Remark	Verdict
<b>9</b>	<b>Final Measurements</b>		
9.1	After the salt mist test the test samples shall be subjected to the following tests depending on the PV module technology.		P
9.2	Crystalline silicon		P
	– Tests according to IEC 61215		—
	a) 10.2: Maximum power determination	See table 9-b)	P
	b) 10.15: Wet leakage current test	See table 9-d)	P
	– Tests according to IEC 61730-2		
	c) MST 01: Visual inspection	See table 9-a)	P
	d) MST 13: Ground continuity test	See table 9-e)	P
	e) MST 16: Dielectric withstand test	See table 9-c)	P
	– Tests according to this standard:		
	f) By pass diode functionality test	See table 9-g)	P
9.3	Thin-film technologies		N/A
	– Tests according to IEC 61646		
	a) 10.2: Maximum power determination after light soaking	See table 9-b)	N/A
	b) 10.15: Wet leakage current test	See table 9-d)	N/A
	c) 10.19: light soaking	See table 9-f)	N/A
	– Tests according to IEC 61730-2		
	d) MST 01: Visual inspection	See table 9-a)	N/A
	e) MST 13: Ground continuity test	See table 9-e)	N/A
	f) MST 16: Dielectric withstand test	See table 9-c)	N/A
	– Tests according to this standard:		
	f) By pass diode functionality test	See table 9-g)	N/A
9.4	Concentrator photovoltaic (CPV) modules		N/A
	– Tests according to IEC 62108		
	a) 10.1: Visual inspection	See table 9-a)	N/A
	b) 10.2: Electrical performance measurement	See table 9-b)	N/A
	c) 10.3: Ground path continuity test	See table 9-e)	N/A
	d) 10.4: Electrical insulation test	See table 9-c)	N/A
	e) 10.5: Wet insulation test	See table 9-d)	N/A
	– Tests according to this standard:		
	f) By pass diode functionality test	See table 9-g)	N/A



IEC 61701: 2011			
Clause	Requirement + Test	Result--Remark	Verdict

<b>10</b>	<b>Requirements</b>		
<b>10.1</b>	Crystalline silicon		
	– After the salt mist test, no evidence of major visual defects as described in IEC 61730-2.	See table 9-a)	P
	– After the salt mist test the maximum power shall not decrease by more than 5% of the initial value;	See table 9-b)	P
	– All pass fail criteria corresponding to tests 10.15, MST 13 and MST 16 must be fulfilled.	MST16 see table 9-c) 10.15 see table 9-d) MST13 see table 9-e)	P
	– The requirement for the bypass diode functionality test must be also fulfilled.	See table 9-g)	P
<b>10.2</b>	Thin-film technologies		
	– After the salt mist test, no evidence of major visual defects as described in IEC 61730-2.	See table 9-a)	N/A
	– After the light soaking the maximum power at STC shall not be less than 90% of the minimum value specified by the manufacturer in the marking of the PV module.	See table 9-b)	N/A
	– All pass fail criteria corresponding to tests 10.15, 10.19, MST 13 and MST 16 must be fulfilled.	MST16 see table 9-c) 10.15 see table 9-d) MST13 see table 9-e) 10.19 see table 9-f)	N/A
	– The requirement for the bypass diode functionality test must be also fulfilled.	See table 9-g)	N/A
<b>10.3</b>	Concentrator photovoltaic (CPV) modules		
	– After the salt mist test, no evidence of major visual defects as described in IEC 62108 including also no mechanical deterioration or corrosion of test sample components which would significantly impair their function during their intended life. No significant amount of water should remain inside the test sample.	See table 9-a)	N/A
	– After the salt mist test the relative power degradation shall not exceed 7% if the I-V measurement is under outdoor natural sunlight or 5% if I-V measurement is under solar simulator.	See table 9-b)	N/A
	– All pass fail criteria corresponding to tests 10.3, 10.4 and 10.5 must be fulfilled.	10.4 see table 9-c) 10.5 see table 9-d) 10.3 see table 9-e)	N/A
	– The requirement for the bypass diode functionality test must be also fulfilled.	See table 9-g)	N/A



Product Service

IEC 61701: 2011			
Clause	Requirement + Test	Result--Remark	Verdict



6-a) TABLE: Visual inspection (Initial)		P
Test Date [MM/DD/YYYY].....: 01-12-2012		—
Sample No.	Nature and position of initial findings – comments or attach photos	Verdict
1	No major visual defects	P
2	No major visual defects	P
3	No major visual defects	P
Supplementary information:		

6-b) TABLE: I-V characteristic at STC (Initial)							P
Test Date [MM/DD/YYYY].....: 01-12-2012							—
Radiant Source.....: <input checked="" type="checkbox"/> Solar simulator <input type="checkbox"/> Natural Sunlight							—
Module temperature [°C] .....: 25							—
Irradiance [W/m <sup>2</sup> ] .....: 1000							—
Sample No.	Voc [V]	Vmp [V]	Isc [A]	Imp [A]	Pmp [W]	Pr [%]	
1	44.75	36.41	5.539	5.215	189.8	N/A	
2	44.81	36.39	5.521	5.234	190.5	N/A	
3	44.85	36.38	5.503	5.224	190.0	N/A	
Supplementary information:							

6-c) Table: Insulation test (initial)					P
Test Date [YYYY-MM-DD].....: 2012-01-13					—
Test Voltage applied [V] .....: 6000/1000					—
Sample #	Measured	Required	Dielectric breakdown		Result
	MΩ	MΩ	Yes (description)	No	
1	>1000	31.25		X	P
2	>1000	31.25		X	P
3	>1000	31.25		X	P
Supplementary information: Size of module 1.28 m <sup>2</sup>					

6-d) TABLE: Wet leakage current test (Initial)				P
Test Date [MM/DD/YYYY].....: 01-17-2012				—
Test voltage applied [V] .....: 1000				—
Module maximum system voltage rating (V, DC).....: 1000				—
Solution resistivity [Ω cm], < 3,500 Ω cm at 22 ± 3 °C .....: Within limits				—
Sample No.	Measured [MΩ]		Limit [MΩ]	Result
1	3540		31.25	P
2	4100		31.25	P
3	473		31.25	P



Product Service

Supplementary information: Size of module 1.28 m<sup>2</sup>

6-e)		MST 13 – ground continuity test (Initial)		P
	Maximum over-current protection rating (A) .....	10		—
	Current applied (A) .....	25		
	Location of designated grounding point.....	On the middle of the longest frame side		—
	Location of second contacting point.....	Adjacent frame side		—
Sample No.	Position in test sequence:	Voltage (V)	Resistance (Ω)	
1	Measurement 1	0.224	0.0089	P
	Measurement 2	0.0807	0.0032	P
2	Measurement 1	0.4633	0.0185	P
	Measurement 2	0.2346	0.0094	P
3	Measurement 1	0.0805	0.0032	P
	Measurement 2	0.0776	0.0031	P
Supplementary information:				

7		TABLE: Salt mist corrosion test	P
	Temperature of test chamber (°C).....	35 ± 2°C	—
	Salt solution concentration (% by weight) .....	5.0 g/l NaCl	—
	Test cycle sequence .....	Salt fog duration (hour): 2 Humid storage (hour): 22 Repeated (times) :3 Subsequent drying at room temperature (day): 3	—
	Total duration of one cycle (day).....	7	—
	Number of cycles .....	4	—
	Humid storage (°C).....	35 ± 2	—
	relative humidity (%).....	99.9	—
	Test duration (day).....	28	—
	Drying temperature (°C).....	25 ± 1	—
Supplementary information: Salt mist test based on IEC 60068-2-52.			

9-a)		TABLE: Visual inspection (final)	P
	Test Date [MM/DD/YYYY].....	03-13-2012	—
Sample No.	Nature and position of initial findings – comments or attach photos		Verdict
1	No major visual defects		P
2	No major visual defects		P
Supplementary information:			



Product Service

<b>9-b)</b>		<b>TABLE: Maximum power determination (final)</b>						P
Test Date [MM/DD/YYYY] start-end .....		03-13-2012						—
Module temperature [°C] low-high .....		Corrected to 25						—
Irradiance [W/m <sup>2</sup> ] low-high.....		Corrected to 1000						—
Sample #	Voc [V]	Vmp [V]	Isc [A]	Imp [A]	Pr [%]	Pmp [W]	Degradation [%]	Limit [%]
1	44.75	36.56	5.531	5.185	N/A	189.6	-0.2	-5
2	44.78	36.62	5.520	5.184	N/A	189.8	-0.1	-5
Supplementary information:								

<b>9-c)</b>		<b>Table: Insulation test (final)</b>				P
Test Date [YYYY-MM-DD].....		2012-03-13				—
Test Voltage applied [V] .....		6000/1000				—
Sample #	Measured	Required	Dielectric breakdown		Result	
	MΩ	MΩ	Yes (description)	No		
1	>10,000	31.25		x	P	
2	>10,000	31.25		x	P	
Supplementary information: Size of module 1.28 m <sup>2</sup>						

<b>9-d)</b>		<b>TABLE: Wet leakage current test (final)</b>		P
Test Date [MM/DD/YYYY].....		03-13-2012		—
Test voltage applied [V] .....		1000		—
Module maximum system voltage rating (V, DC).....		1000		—
Solution resistivity [Ω cm], < 3,500 Ω cm at 22 ± 3 °C .....		Within limits		—
Sample No.	Measured [MΩ]		Limit [MΩ]	Verdict
1	2100		31.25	P
2	2430		31.25	P
Supplementary information:				

<b>9-e)</b>		<b>MST 13 – ground continuity test (final)</b>		P
Maximum over-current protection rating (A) .....		10		—
Current applied (A) .....		25		—
Location of designated grounding point.....		On the middle of the longest frame side		—
Location of second contacting point.....		Adjacent frame side		—
Sample No.	Position in test sequence:	Voltage (V)	Resistance (Ω)	
1	Measurement 1	0.2379	0.0095	P
	Measurement 2	0.1161	0.0046	P
2	Measurement 1	0.0979	0.0039	P
	Measurement 2	0.0793	0.0032	P



Product Service

Supplementary information:

9-f)		TABLE: Light soaking						N/A	
Abbreviation: Regarding light source "S" for Solar simulator and "N" for Natural sunlight									
Sample #		Test Date (MM/DD/YYYY) start/end							
Test cycle	Light source	Irradiance applied (kWh/m <sup>2</sup> )	Average irradiance (W/m <sup>2</sup> )	Module temperature during test (°C)			Pmp(W) at the end of cycle	Change in Pmp in the cycle (%)	
				min	max	avg			
Initial	—	—	—	—	—	—		—	
1									
2									
Supplementary information:									
Sample #		Test Date (MM/DD/YYYY) start/end							
Test cycle	Light source	Irradiance applied (kWh/m <sup>2</sup> )	Average irradiance (W/m <sup>2</sup> )	Module temperature during test (°C)			Pmp(W) at the end of cycle	Change in Pmp in the cycle (%)	
				min	max	avg			
Initial	—	—	—	—	—	—		—	
1									
2									
Supplementary information:									

9-g)		TABLE: Bypass diode thermal test						P	
Sample No.		1						—	
Test Date [MM/DD/YYYY].....:		03-14-2012						—	
Module temperature [°C]..... :		25.9						—	
Number of diodes in junction box..... :		3						—	
Diode manufacturer .....		PanJit						—	
Diode type designation .....		10SQ050						—	
Rated STC short-circuit current [A]..... :		5.54						—	
Current flow (1.25 * Isc) [A] .....		6.93						P	
Test duration (hour)		1						P	
		D1	D2	D3	D4	D5	D6	Result	
Diode functional? yes/no .....		yes	yes	yes	N/A	N/A	N/A	P	
Sample No.		2						—	
Test Date [MM/DD/YYYY].....:		03-13-2012						—	
Module temperature [°C]..... :		26.3						—	
Number of diodes in junction box..... :		3						—	
Diode manufacturer .....		PanJit						—	
Diode type designation .....		10SQ050						—	

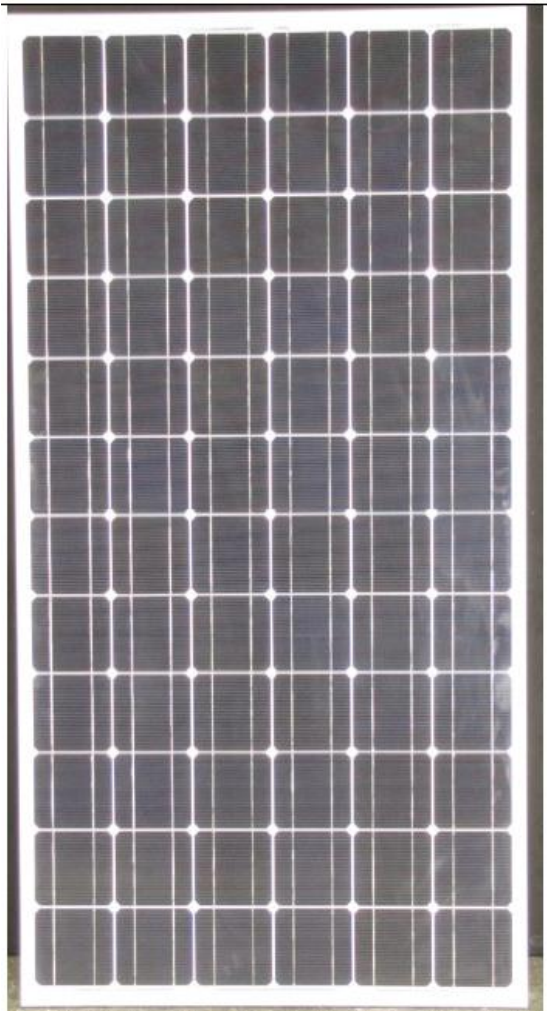


Product Service

Rated STC short-circuit current [A]..... :	5.54						—
Current flow (1.25 * Isc) [A] ..... :	6.94						P
Test duration (hour)	1						P
	D1	D2	D3	D4	D5	D6	Result
Diode functional? yes/no ..... :	yes	yes	yes	N/A	N/A	N/A	P
Supplementary information:							



### Photos of samples



Front of sample 1

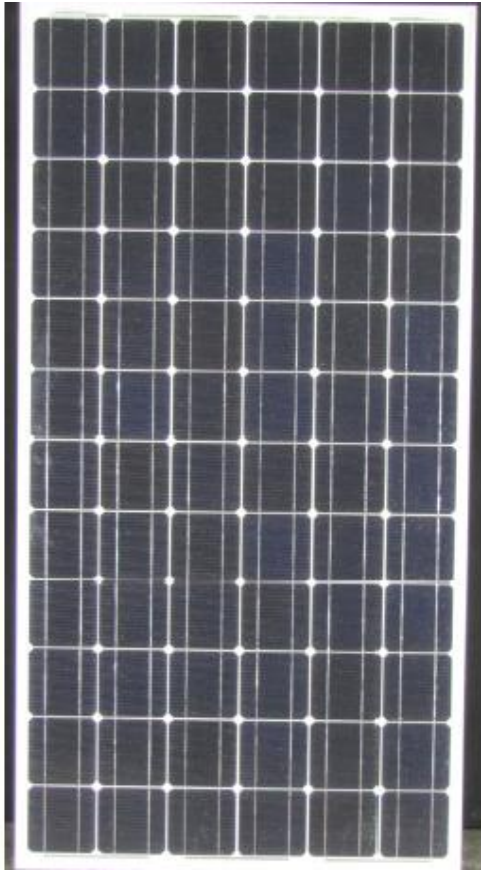


Back of sample 1

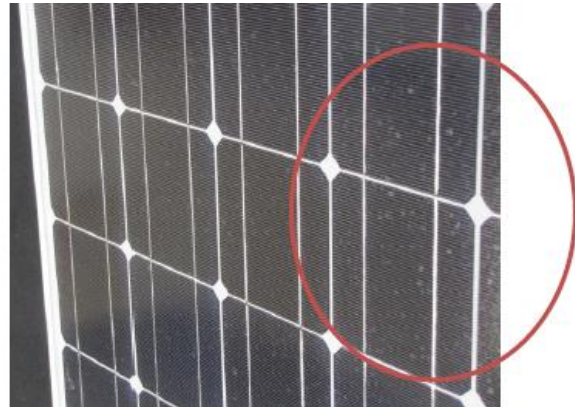


Junction box of sample 1

After salt mist tests and before cleaning:



Front of sample 1



Dirty pattern on front of sample 1



Sample 1 and sample 2 in salt mist test chamber

END OF REPORT