Product Service

Technical Report No.: 704062536703-00

Date: 2025-05-27

Client:	Solenso electronic materials Co.,LTD 4F., No.56, Zili 5th st Zhongli 320553 Taoyuan TAIWAN
Factory:	Solenso electronic materials Co.,LTD 4F., No.56, Zili 5th st Zhongli 320553 Taoyuan TAIWAN
Test object:	Product: Photovoltaic modules
Test specification:	IEC 61215:2025, Clause MQT 01 Visual Inspection IEC 61215:2025, Clause MQT 06.1 Performance at STC IEC 61215:2025, Clause MQT 16 Static mechanical load Test
Purpose of examination:	• Testing and evaluation (visual / partial) according to the test specification
Test result:	The test results show that the presented product is in compliance with the above listed test specifications.

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Product Service

1. Description of the test object

1.1 Picture(s)

N/A

1.2 Function

Manufacturer's specification for intended use:
The PV modules for electricity generation systems with max. voltage of 1500 V DC

Manufacturer's specification for predictive use:
N/A

1.3 Consideration of the foreseeable use

☒ Not applicable
☐ Covered through the applied standard
☐ Covered by the following comment*
☐ Covered by attached risk analysis
*

1.4 Technical Data

Test sample No.	Module Type	Module serial No.
1	ICON-54M10RC3G-XXX	SD105251012989 (Control module)
2	ICON-54M10RC3G-XXX	SD105251012901

2. Order

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2.1 Date of Purchase Order, Customer's Reference

The order dated 2025-04-15

2.2 Test Sample(s)

- Reception date(s): 2025-04-25
- Location(s) of reception:
  Yangzhou Opto-Electrical Products Testing Institute
  No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China
- Condition of test sample(s): N/A

2.3 Date(s) of Testing 2025-05-22~2025-05-23

2.4 Location(s) of Testing Yangzhou Opto-Electrical Products Testing Institute
No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China

2.5 Points of Non-Compliance or Exceptions of the Test Procedure

- None

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3. Test Results

TABLE 3.1	MQT 01 - Visual inspection	P
Test Date [YYYY-MM-DD] .....:	2025-05-22	—
Sample #	Nature and position of initial findings – comments or attach photos	—
1	No major visual defects	P
2	No major visual defects	P
Supplementary information: N/A		

TABLE 3.2	MQT 06.1 - Performance at STC					—
Test Date [YYYY-MM-DD] .....:	2025-05-22					—
Radiant Source .....:	☒ Solar simulator ☐ Natural Sunlight					—
Module temperature [°C] .....:	25					—
Irradiance [W/m²] .....:	1000					—
Sample #	Isc [A]	Voc [V]	Imp [A]	Vmp [V]	Pmp [W]	FF [%]
1	15.558	39.845	14.756	34.156	504.006	81.30
2	15.453	39.812	14.667	34.123	500.482	81.35
Supplementary information: N/A						

TABLE 3.3	MQT 03 ini: Initial Insulation test		P
Test Date [YYYY-MM-DD].....:	2025-05-22		—
Test Voltage applied [V] .....:	8000/1500		—
Size of module [m²].....:	2.22		—
Required Resistance [MΩ] .....:	18.02		—
Sample #	Measured	Dielectric breakdown	Result
	MΩ	Yes (description) / No	
1	>10000	No Dielectrical breakdown / X	P
2	>10000	No Dielectrical breakdown / X	P

Supplementary information: The maximum measuring limit of the equipment is 10000 MΩ.

TABLE 3.4	**MQT 15 ini: Initial Wet leakage current test**		P
Test Date [YYYY-MM-DD]..... :		2025-05-22	—
Test Voltage applied [V]..... :		1500	—
Solution temperature [°C] ..... :		22.8	—
Solution resistivity [Ω cm] ..... :		2736	—
Size of module [m²]..... :		2.22	—
Sample #	Required Resistance [MΩ]	Measured [MΩ]	Result
1	18.02	>10000	P
2	18.02	>10000	P
Supplementary information: The maximum measuring limit of the equipment is 10000 MΩ.			

TABLE 3.5	**MQT 16 Static mechanical load test**		P
Sample # :	2		—
Design load(front side/ back side) ..... :	1200/1200		—
Safety factors..... :	1.5		—
Test Date [YYYY-MM-DD].....	2025-05-23		—
Mounting method ..... :	Installed with four clamps at longer frame		—
Load applied to ..... :	front side	back side	—
Mechanical load [Pa] ..... :	1800	1800	—
First cycle time (start/end) ..... :	09:15-10:15	10:25-11:25	—
Intermittent open-circuit (yes/no) ..... :	no	no	P
Second cycle time (start/end) ..... :	11:35-12:35	12:50-13:50	—
Intermittent open-circuit (yes/no) ..... :	no	no	P
Third cycle time (start/end) ..... :	13:57-14:57	15:13-16:13	—
Intermittent open-circuit (yes/no) ..... :	no	no	P
Supplementary information:			

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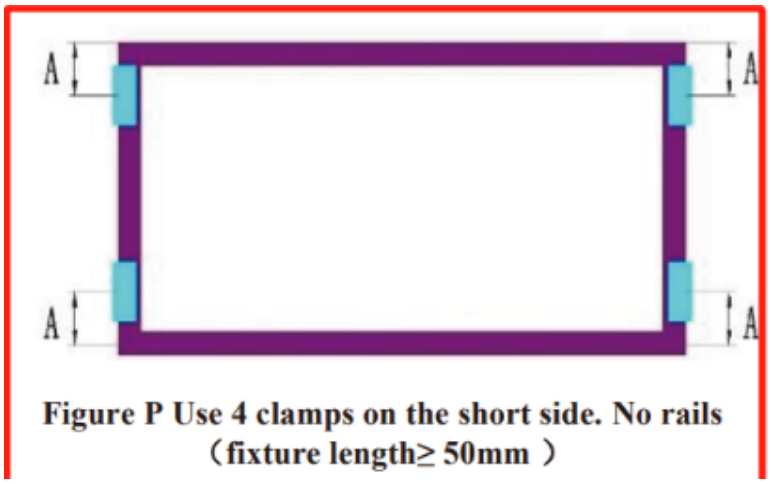

Figure P Use 4 clamps on the short side. No rails
（fixture length≥ 50mm ）

TABLE 3.6	MQT 01 - Visual inspection after static mechanical load test	P
Test Date [YYYY-MM-DD].....:	2025-05-23	—
Sample #	Nature and position of initial findings – comments or attach photos	—
1	No major visual defects found	P
2	No major visual defects found	P
Supplementary information: N/A		

TABLE 3.7	MQT 15 - Wet leakage current test after static mechanical load test		P
Test Date [YYYY-MM-DD].....:	2025-05-23		—
Test Voltage applied [V]..... :	1500		—
Solution temperature [°C] ..... :	23.1		—
Size of module [m²].....:	2.22		—
Solution resistivity [Ω cm] .....:	2668		—
Sample #	Measured [MΩ]	Limit [MΩ]	Result
1	>10000	18.02	P
2	>10000	18.02	P
Supplementary information: The maximum measuring limit of the equipment is 10000 MΩ.			

TABLE 3.8:	MQT 02 - Maximum power determination after static mechanical load test	P
Test Date [YYYY-MM-DD].....:	2025-05-23	—
Module temperature [°C] .....:	25.0	—

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Irradiance [W/m²) .....:	1000	—

Sample #	Isc [A]	Voc [V]	Imp [A]	Vmp [V]	Pmax [W]	FF [%]	Result
1	15.545	39.836	14.745	34.145	503.468	81.30	15.545
2	15.412	39.765	14.454	34.105	492.954	80.44	15.412

Supplementary information:
Power Degradation [%]
1: -0.11%
2: -1.50%

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4. Remarks

Appendix 1: Statement of the estimated uncertainty of the test results

Pmax measurement uncertainty: 2.24% （K=2）
Voc measurement uncertainty: 0.70% （K=2）
Isc measurement uncertainty: 2.20% （K=2）

5. Summary

The test specifications (static mechanical load test: 1800/1800 Pa) are met

TÜV SÜD Certification and Testing (China)Co., Ltd. Shanghai Branch

Tested by: Yuezhong Shi

printed name, function & signature

Approved by: Guangxia Fu

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