

Technical Report No.: 704062300929-00

Date: 2023-12-19

Client: Trina Solar Co., Ltd.
No. 2 TianHe Road, Trina PV Industrial Park, New District, 213031
Changzhou City, Jiangsu Province, PEOPLE'S REPUBLIC OF
CHINA

Factory: Trina Solar Co., Ltd.
No. 2 TianHe Road, Trina PV Industrial Park, New District, 213031
Changzhou City, Jiangsu Province, PEOPLE'S REPUBLIC OF
CHINA

Test object: Product: Crystalline Silicon Photovoltaic modules

Model: See clause 1.4

Test specification: IEC 61730-2: 2016 MST 23 Fire test
(Test method is according to UL790)

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 specific requirements.

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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

Sample No.	Module type	Model serial No.	Remark
GDP240095-1	TSM-430NEG9R.28	A03230201000925	Spread-of-flame test
GDP240095-2	TSM-430NEG9R.28	A04230200617153	Spread-of-flame test
GDP240095-3	TSM-430NEG9R.28	A04230900800108	Ignition of brands
GDP240096-1	TSM-425NEG9RC.27	A03230701766984	Spread-of-flame test
GDP240096-2	TSM-425NEG9RC.27	A03230702102446	Spread-of-flame test
GDP240096-3	TSM-425NEG9RC.27	A03230702101725	Ignition of brands

2. Order

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2.1 Date of Purchase Order, Customer's Reference

The order dated 2023-12-06

2.2 Test Sample(s)

- Reception date(s): 2023-12-07
- Location(s) of reception: Yangzhou Opto-electrical Product Testing Institute
No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu,
P. R. China
- Condition of test sample(s): In good condition

2.3 Date(s) of Testing 2023-12-14

2.4 Location(s) of Testing

Yangzhou Opto-electrical Product 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

3. Test Results

- "Decision rule according to IEC Guide 115:2023, clause 4.3 was applied."
- "Decision rule (based on ILAC-G8) for an upper specification limit (A lower limit or specification with an up-per and a lower limit is treated similarly.):
 - Compliance with the requirement: If a specification limit is not breached by a measurement result plus the expanded uncertainty with a 95% coverage probability, then compliance with the specification will be stated (e.g. Pass).

3.1 Positive Test Results

3.1.2	TABLE: Fire Test - MST 23 (Spread-of-flame test)		P
	Test Date [YYYY/MM/DD].....	2023-12-14	—
	Module fire resistance class.....	Class A	—
	No. of modules provided to create the test assembly.....	2	—
	Testing method.....	according to UL790	—
	Test environmental conditions.....	25°C, 32% R.H.	—
	Test temperature (°C).....	735~768	—
	Wind speed (m/s).....	5.21 (76mm from right) 5.19 (middle) 5.24 (76mm from left) 5.21 (Average)	—
	Test duration time (s).....	600	—
	Sample No.	Observations	—
	GDP2400095-1	<input checked="" type="checkbox"/> Modules comply with the requirements for the fire resistance class	P
	GDP240095-2		
Supplementary information: The backpanel has broken, but nothing has been blown off or fallen off the test deck in the form of flaming or growing brands.			

3.1.3	TABLE: Fire Test - MST 23 (Ignition of brands)		P
	Test Date [YYYY/MM/DD].....	2023-12-14	—
	Module fire resistance class.....	Class C	—
	No. of modules provided to create the test assembly.....	1	—
	Testing method.....	according to UL790	—
	Test environmental conditions.....	25°C, 31% R.H.	—
	Test temperature of the igniting flame(°C).....	878~895	—
	Sample No.	Observations	—
	GDP240095-3	<input checked="" type="checkbox"/> Modules comply with the requirements for the fire resistance class	P
Supplementary information: N/A			



3.1.4	TABLE: Fire Test - MST 23 (Spread-of-flame test)		P
	Test Date [YYYY/MM/DD].....	2023-12-14	—
	Module fire resistance class.....	Class A	—
	No. of modules provided to create the test assembly.....	2	—
	Testing method.....	according to UL790	—
	Test environmental conditions.....	25°C, 31% R.H.	—
	Test temperature (°C).....	739~785	—
	Wind speed (m/s).....	5.23 (76mm from right) 5.22 (middle) 5.24 (76mm from left) 5.23 (Average)	—
	Test duration time (s).....	600	—
	Sample No.	Observations	—
	GDP240096-1	<input checked="" type="checkbox"/> Modules comply with the requirements for the fire resistance class	P
	GDP240096-2		
Supplementary information: The backpanel has broken, but nothing has been blown off or fallen off the test deck in the form of flaming or growing brands.			

3.1.5	TABLE: Fire Test - MST 23 (Ignition of brands)		P
	Test Date [YYYY/MM/DD].....	2023-12-14	—
	Module fire resistance class.....	Class C	—
	No. of modules provided to create the test assembly.....	1	—
	Testing method.....	according to UL790	—
	Test environmental conditions.....	25°C, 31% R.H.	—
	Test temperature of the igniting flame(°C).....	879~896	—
	Sample No.	Observations	—
	GDP240096-3	<input checked="" type="checkbox"/> Modules comply with the requirements for the fire resistance class	P
Supplementary information: N/A			



3.2 Points of Non-Compliance according to the test specification

- None

4. Remarks

4.1 General

N/A

4.2 Factory surveillance cycle

Your production facility is currently on a

- Annual (12 month)
- Bi-Annual (6 month)
- Quarterly (3 month)
- N/A

surveillance cycle.

4.3 Additional information for routine tests to be performed by the factory(ies)

Routine tests for electrical appliances / equipment:

N/A

5. Documentation

Appendix 1: List of measurement equipment

Description	Equipment ID	Due Date of calibration
Spread-of-flame tester	SB11086	2024.08.24
Burning brand tester	SB11087	2024.08.24

6. Summary

“The test specifications are met”



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

Tested by:

Meng Wang

printed name, function & signature

Approved by:

Jian Zeng

printed name, function & signature