

Technical Report No.: 704062515706-00

Date: 2025-08-14

Client: Hanersun Energy Co., Ltd.
10F, B4 Block, No.19 Suyuan Avenue, Jiangning District, 211100
Nanjing, PEOPLE'S REPUBLIC OF CHINA
Contact person: Ms. Luo

Factory: Hanersun Cleantech Co., Ltd. (126900)
Intersection of Xuanzhi Road and Fuxing Road at the Intelligent
Manufacturing Base of Motor, Pump and Valve in Jingxian Coun-ty
242500 Xuancheng City, Anhui Province PEOPLE'S REPUB-LIC
OF CHINA

Test object: Product: Photovoltaic modules

Test specification: IEC 61730-2: 2021
MST 23 Fire test (Test method is according to Class A according
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 above listed test specifications.

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1. Description of the test object

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TÜV SÜD Certification and Testing (China) Co., Ltd.
Shanghai Branch
SMN
No. 151 Heng Tong Road,
Shanghai 200070, P. R. China
Telephone: +86 21 6141-0100

1.1 Picture(s)



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 serial No.
010250014-1	HN21R25070113019
010250014-3	HN21R25070113029

Applicable Modules (due to same materials and similar construction):

HN21N-66HTxxxW, xxx=670-720 in steps of 5
 HN21N-60HTxxxW, xxx=610-655 in steps of 5
 HN21RN-66HTxxxW, xxx=600-630 in steps of 5
 HN21RN-54HTxxxW, xxx=490-515 in steps of 5
 HN21RN-48HTxxxW, xxx=430-455 in steps of 5
 HN19RN-72HTxxxW, xxx=600-630 in steps of 5
 HN19RN-60HTxxxW, xxx=500-525 in steps of 5
 HN18N-78HTxxxW, xxx=615-650 in steps of 5
 HN18N-72HTxxxW, xxx=570-600 in steps of 5
 HN18N-66HTxxxW, xxx=520-550 in steps of 5
 HN18N-60HTxxxW, xxx=475-500 in steps of 5
 HN18N-54HTxxxW, xxx=425-450 in steps of 5
 HN18N-32HTxxxW, xxx=250-265 in steps of 5
 HN18N-16HTxxxW, xxx=125-130 in steps of 5
 HN18RN-72HTxxxW, xxx=580-615 in steps of 5
 HN18RN-54HTxxxW, xxx=430-460 in steps of 5
 xxx is standing for rated output power at STC

2. Order

2.1 Date of Purchase Order, Customer's Reference

The order dated 2025-07-16

2.2 Test Sample(s)

- Reception date(s): 2025-07-25
- Location(s) of reception:
Yangzhou Opto-Electrical Products Testing Institute Co. Ltd.
No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China
- Condition of test sample(s): N/A

2.3 Date(s) of Testing 2025-08-01

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

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

- None

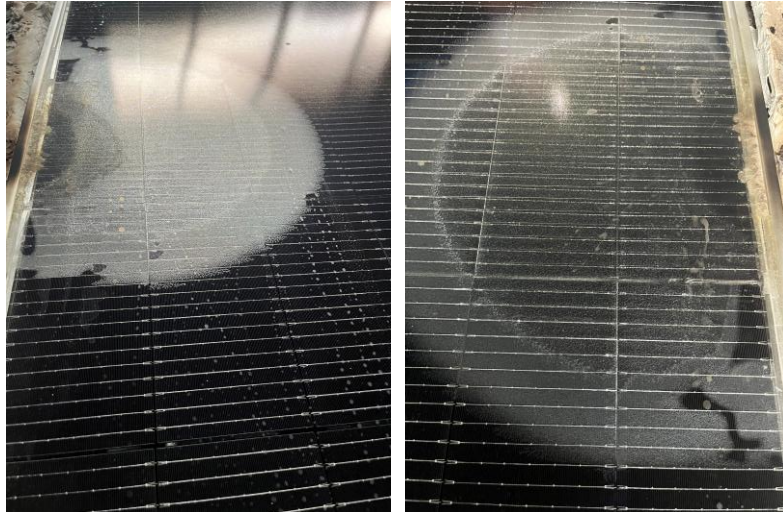
3. Test Results

TABLE 3.1: MQT 01- Visual inspection			P
Test Date [YYYY-MM-DD].....: 2025-08-01			—
Sample #	Nature and position of initial findings – comments or attach photos		—
010250014-1	No major visual defects found		P
010250014-3	No major visual defects found		P
Supplementary information: N/A			

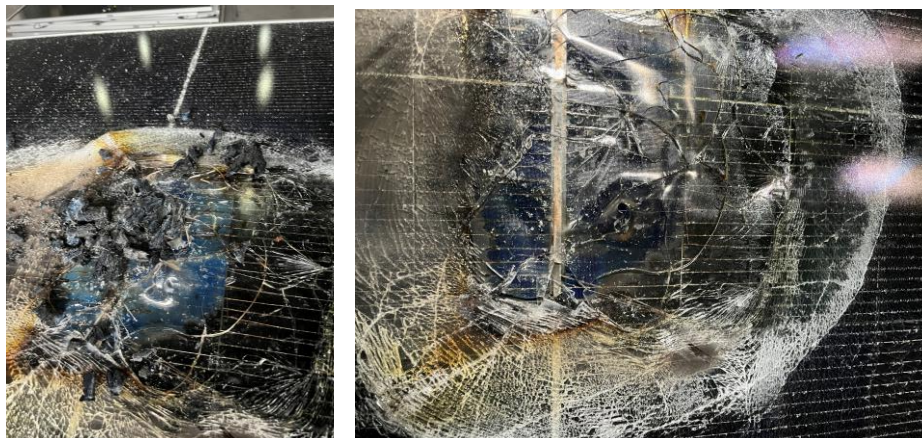
TABLE 3.2: Fire Test - MST 23			P
Test Date [YYYY-MM-DD].....: 2025-08-01			—
Module fire resistance class: Spread of flame test: Class A Burning brand test: Class A			—
No. of modules provided to create the test assembly.....: 2 / 2			—
Testing method.....: UL790			—
Sample No.	Observations		—
010250014-1	☒ Modules comply with the requirements for the fire resistance class A		P
010250014-3			
—			

Supplementary information: Sample 010250014-3 was used for burning brand test, sample 010250014-1 were used for spread-of-flame test.

010250014-1:



010250014-3:



4. Remarks

N/A

5. Summary

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Fire Safety Class: Class A according to UL790.
The test specifications are met.

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

Tested by: Yuezhong Shi 
printed name, function & signature

Approved by: Guangxia Fu 
printed name, function & signature