

Technical Report No.: 701262429001-00

Date: 2024-10-25

Client: Sunpal Solar Power Co., Ltd.
Room 1505, Building A, Jiagiao International Plaza, No.9 Dongliu Road, Baohe District, 230000 Hefei City, Anhui Province, PEOPLE'S REPUBLIC OF CHINA
Customer No.: 129067

Manufacturer: Sunpal Solar Power Co., Ltd.
Room 1505, Building A, Jiagiao International Plaza, No.9 Dongliu Road, Baohe District, 230000 Hefei City, Anhui Province, PEOPLE'S REPUBLIC OF CHINA
Customer No.: 129067

Factories: Anhui Huasun Energy Co.,Ltd.
No. 99, Qingliu Road, Xuancheng Economic and Technological Development Zone, Xuanzhou District, Xuancheng City, Anhui Province,China.
Customer No.: 110450

Xuancheng Huasun Energy Co., Ltd.
No. 99, Qingliu Road, Xuancheng Economic and Technological Development Zone, Xuanzhou District, Xuancheng City, Anhui Province,China.
Customer No.:120424

Dali Huasun Photovoltaic Co., Ltd.
No.2, Rainbow Road, Shangdeng Industrial Park, Dali Economic and Technological Development Zone, 671000 Dali Bai Autonomous Prefecture, Yunnan, PEOPLE'S REPUBLIC OF CHINA
Customer No.:121822

Hefei Huasun Energy Co., Ltd.
No.99 Jingangtai Road, Zipeng Town, 231201 Hefei City, Anhui Province, PEOPLE'S REPUBLIC OF CHINA
Customer No.:126027

Test object: Product: Photovoltaic modules

Model: See clause 1.4

Test specification: IEC 61215-1:2021
IEC 61215-1-1:2021
IEC 61215-2:2021
IEC 61730-1:2023
IEC 61730-2:2023
EN IEC 61215-1-1:2021
EN IEC 61215-1:2021
EN IEC 61215-2:2021

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

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

Model : 210 x 105mm cell modules:

132 cells: SPxxxMB-66H (xxx=640 to 725 in step of 5)

120 cells: SPxxxMB-60H (xxx=590 to 650 in step of 5)

110 cells: SPxxxMB-55H (xxx=540 to 590 in step of 5)

132 cells: SPNxxxM-66H (xxx=680 to 720 in step of 5)

182 x 91.75mm cell modules:

144 cells: SPxxxMB-72H (xxx=550 to 600 in step of 5)

108 cells: SPxxxMB-54H (xxx=410 to 450 in step of 5)

108 cells: SPxxxM-54HB (xxx=425 to 445 in step of 5)

108 cells: SPxxxMB-54HT (xxx=410 to 440 in step of 5)

108 cells: SPxxxMB-54HB (xxx=420 to 440 in step of 5)

182 x 105mm cell modules:

132 cells: SPxxxMB-66H (xxx=590 to 630 in step of 5)

108 cells: SPxxxMB-54H (xxx=480 to 515 in step of 5)

96 cells: SPxxxMB-48H (xxx=430 to 460 in step of 5)

108 cells: SPxxxMB-54HB (xxx=470 to 500 in step of 5)

108 cells: SPxxxMB-54HT (xxx=470 to 510 in step of 5)

108 cells: SPxxxM-54HB (xxx=480 to 505 in step of 5)

96 cells: SPxxxMB-48HB (xxx=420 to 445 in step of 5)

96 cells: SPxxxMB-48HT (xxx=420 to 450 in step of 5)

96 cells: SPxxxM-48HB (xxx=425 to 450 in step of 5)

132 cells: SPNxxxMB-66H (xxx=585 to 620 in step of 5)

108 cells: SPNxxxMB-54H (xxx=475 to 525 in step of 5)

108 cells: SPNxxxMB-54HT (xxx=475 to 520 in step of 5)

108 cells: SPNxxxM-54HB (xxx=475 to 530 in step of 5)

108 cells: SPNxxxMB-54HB (xxx=470 to 520 in step of 5)

96 cells: SPNxxxMB-48H (xxx=425 to 465 in step of 5)

96 cells: SPNxxxMB-48HT (xxx=420 to 460 in step of 5)

96 cells: SPNxxxM-48HB (xxx=425 to 470 in step of 5)

96 cells: SPNxxxMB-48HB (xxx=415 to 460 in step of 5)

xxx stands for rated output power at STC.

The corresponding BNPI power range as follows:

All electrical data is shown as relative to this test conditions: front side irradiance 1000 W/m², backside irradiance 135 W/m², 25 °C, AM 1.5

Framed:

210 x 105mm cell modules:

132 cells: SPxxxMB-66H (BNPI Power range:

717,723,728,734,740,745,751,757,762,768,773,779,785,790,796,801,807,813)

120 cells: SPxxxMB-60H (BNPI Power range:

661,667,672,678,684,689,695,700,706,712,717,723,728)

110 cells: SPxxxMB-55H (BNPI Power range:

605,611,616,622,628,633,639,644,650,656,661)

132 cells: SPNxxxM-66H (BNPI Power range:

762,768,773,779,785,790,796,801,807)

182 x 91.75mm cell modules:



144 cells: SPxxxMB-72H (BNPI Power range: 616, 622,628,633,639,644,650,656,661,667,672)
108 cells: SPxxxMB-54H (BNPI Power range: 459,465,471,476,482,487,493,499,504)
108 cells: SPxxxMB-54HT (BNPI Power range: 459,465,471,476,482,487,493)
108 cells: SPxxxMB-54HB (BNPI Power range: 471,476,482,487,493)

182 x 105mm cell modules:
132 cells: SPxxxMB-66H (BNPI Power range: 661,667,672,678,684,689,695,700,706)
108 cells: SPxxxMB-54H (BNPI Power range: 538,543,549,555,560,566,571,577)
96 cells: SPxxxMB-48H (BNPI Power range: 482,487,493,499,504,510,515)
108 cells: SPxxxMB-54HB (BNPI Power range: 527,532,538,543,549,555,560)
108 cells: SPxxxMB-54HT (BNPI Power range:527,532,538,543,549,555,560,566,571)
96 cells: SPxxxMB-48HB (BNPI Power range:471,476,482,487,493,499)
96 cells: SPxxxMB-48HT (BNPI Power range: 471,477,482,488,493,499,505)
132 cells: SPNxxxMB-66H (BNPI Power range:656,661,667,672,678,684,689,695)
108 cells: SPNxxxMB-54H (BNPI Power range:532,538,543,549,555,560,566,571,577,583,588)
108 cells: SPNxxxMB-54HT (BNPI Power range: 532,538,543,549,555,560,566,571,577,583)
108 cells: SPNxxxMB-54HB (BNPI Power range: 527,532,538,543,549,555,560,566,571,577,583)
96 cells: SPNxxxMB-48H (BNPI Power range:476,482,487,493,499,504,510,515,521)
96 cells: SPNxxxMB-48HT (BNPI Power range: 471,477,482,488,493,499,505,510,515)
96 cells: SPNxxxMB-48HB (BNPI Power range: 465,471,476,482,487,493,499,504,510,515)

Rated output Power at STC : See above

2. Order

2.1 Date of Purchase Order, Customer's Reference

2024-10-12

2.2 Test Sample(s)

- Reception date(s): N/A
- Location(s) of reception: N/A
- Condition of test sample(s): N/A

2.3 Testing

- Testing date(s): N/A
- Location(s) of testing: N/A

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

- None

3. Test Results

- There are no statements to conformity or no results with measurand stated in this report, no decision rule has been applied.

3.1 Positive Test Results

Test specification(s)	Report no. / Rev. No.	Date	Remark
Electrical safety:	704062420211-04	2024-09-23	N/A
Mechanical safety:	704062420211-04	2024-09-23	N/A
Functional safety:	N/A	N/A	N/A

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Cyber security:	N/A	N/A	N/A
EMF / EMC / Radiation:	N/A	N/A	N/A
Outdoor / Noise / Vibration:	N/A	N/A	N/A
Pressure vessels:	N/A	N/A	N/A
DVGW:	N/A	N/A	N/A
Chemical requirements / compounds:	N/A	N/A	N/A
PAH:	N/A	N/A	N/A
Batteries:	N/A	N/A	N/A
LFGB / Hygiene:	N/A	N/A	N/A
Energy efficiency:	N/A	N/A	N/A
Explosion Protection:	N/A	N/A	N/A
Other specifications:	N/A	N/A	Refer Clause 5.1

3.2 Points of Non-Compliance according to the test specification

- None

4. Test History

Refer to previous projects

5. Remarks

5.1 General

Application for Co-license of Sunpal Solar Power Co., Ltd. (Based on Anhui Huasun Energy Co.,Ltd. Project No. 704062420211-04).

The user manual has been examined according to the minimum requirements described in the product standard. The manufacturer is responsible for the accuracy of further particulars as well as of the composition and layout.

5.2 Factory surveillance cycle

Your production facility is currently on the following surveillance cycle.

- Annual (12 month)
- Bi-Annual (6 month)
- Quarterly (3 month)

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

Routine tests for electrical appliances / equipment:

The routine test requirements for production are described in each factory inspection report.

6. Documentation

File	File name	Date
Data form (CDF):	701262429001-00 CDF_TUV MARK_E	2024-10-25
Photo documentation:	N/A	N/A
User manual:	N/A	N/A
Installation manual:	701262414201-01 MAN_TUV MARK_E	2024-10-25

7. Summary

"The test specifications are met"

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

Tested by: Yi Lu *Yi Lu*
printed name, function & signature

Approved by: Yang Xu *Xu Yang*
printed name, function & signature

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