

## **Test Report No. TRPVP05004/23P/01**

### **Photovoltaic Module Performance Measurement at Standard Test Condition (STC)**

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**File No.:** PVP05004/23P

**Designed:** by:  
(Project Engineer)

**Reviewed:** by:  
(Technical Certifier)

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## 1. Setting of tasks

Performance measurements on 2 PV modules at standard test conditions (STC) according to IEC 60904-1:2020, IEC 60904-3:2019 and IEC 61215-2:2016 MQT 06.1

## 2. Basis for testing

- IEC 60904-1:2020 Photovoltaic devices - Part 1: Measurement of photovoltaic current-voltage characteristics.
- IEC 60904-3:2019 Photovoltaic devices - Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data.
- IEC 60904-9:2020 Photovoltaic devices - Part 9: Classification of solar simulator characteristics
- IEC 61215-2:2016 Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part2: Test procedures

## 3. Test location

**TÜV NORD PV Science & Technology Co., Ltd.**

East side 1st Floor (South), Building 11, South Zone of Modern Industrial Park  
 Wuzhong Science and Technology City, No. 38, Beiguandu Road  
 Wuzhong District, Suzhou, China

## 4. Samples

Sample #	Module type	Sample S/N	Remark
1	AIKO-A620-MAH72Mw	M01230427E1240009	2278mm x 1134mm x 35mm
2	AIKO-A620-MAH72Mw	M01230427E1240010	2278mm x 1134mm x 35mm

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## 5. Test results

### Module type: AIKO-A620-MAH72Mw

Test date [MM/DD/YYYY] .....		05/09/2023				
Module temperature [°C] .....		Corrected to 25.0				
Irradiance [W/m <sup>2</sup> ] .....		Corrected to 1000				
Sample #	Voc [V]	Vmpp [V]	Isc [A]	Impp [A]	Pmpp [W]	FF [%]
1	53.514	46.750	14.094	13.330	623.16	82.62
2	53.532	46.815	14.098	13.336	624.32	82.73
Supplementary information: The tests are performed according to client's application. The test method is Dragon Back method. Module efficiency: 24.12% for #1, 24.17% for #2 The measurements were performed with a pulsed solar simulator class A+A+A+ according to IEC 60904-9:2020.						

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## Annex 1: List of measurement equipment

No.	Equipment	Identification	Next calibration date
1	Pulsed solar simulator	TNRDEQ001	11/17/2023
2	EL tester	TNRDTI017	N/A

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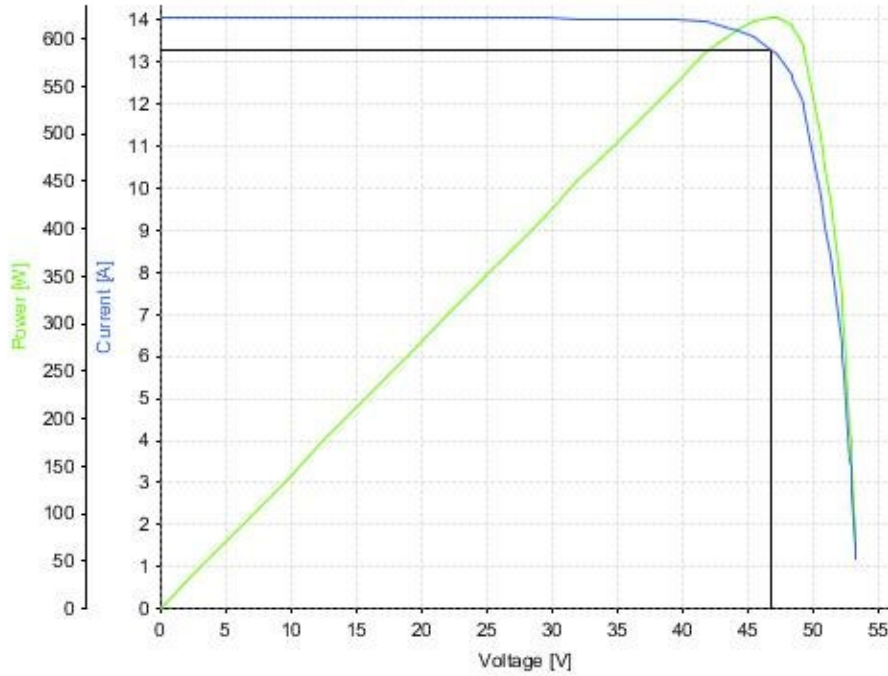
## **Annex 2: Statement of the estimated uncertainty of the test results**

The total measuring uncertainty of P<sub>mpp</sub> is  $\leq 2.48\%$

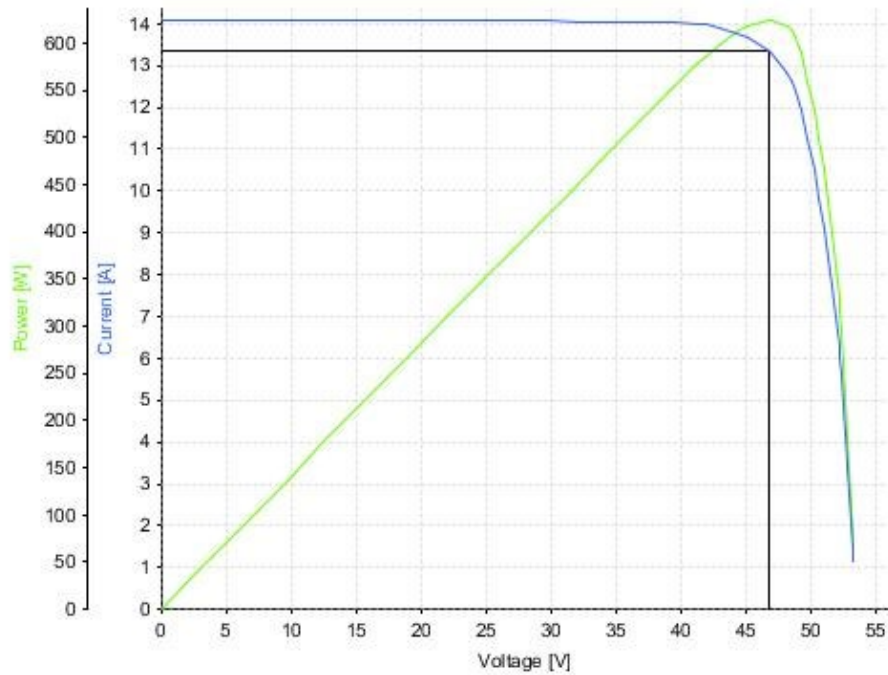
The total measuring uncertainty of I<sub>sc</sub> is  $\leq 2.44\%$

The total measuring uncertainty of V<sub>oc</sub> is  $\leq 0.90\%$

**Annex 3: IV measurement characteristics**



*Sample #1(Dragon Back method)*



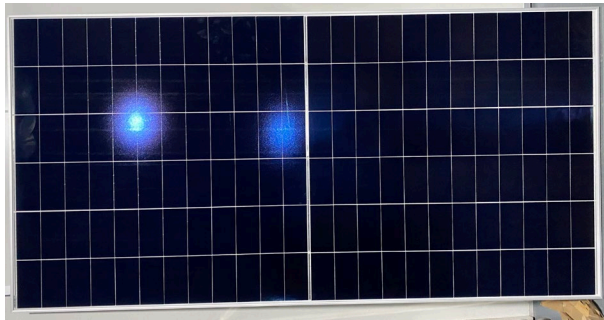
*Sample #2 (Dragon Back method)*

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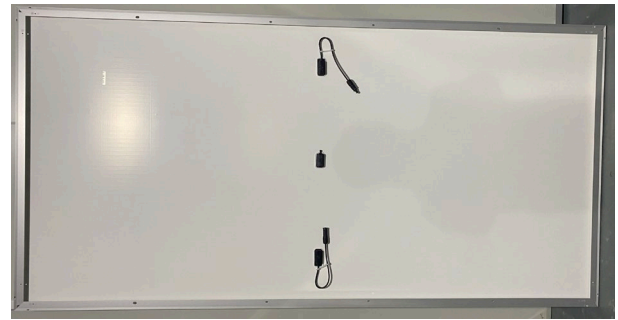
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**Annex 4: Photos**

**Module type: AIKO-A620-MAH72Mw**



*Front overview*



*Back overview*

N/A



*Nameplate (Not stuck on the modules)*

*Junction box (not specified)*



*Junction box (opened)*



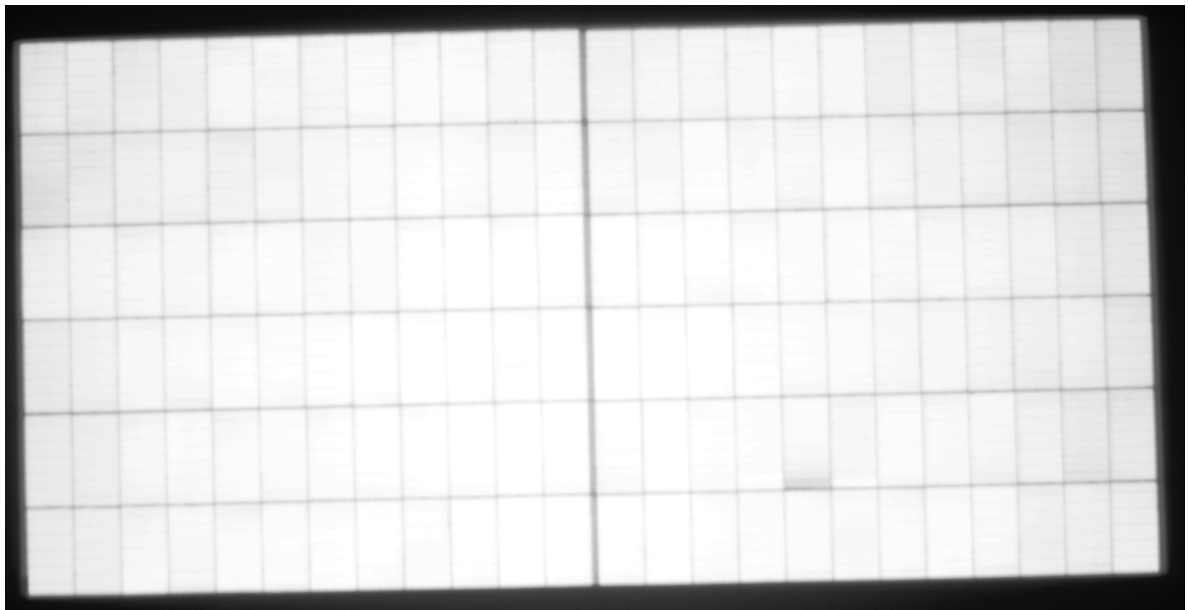
*Connectors (RHC2)*



**Annex 5: EL images**



*Sample #1*



*Sample #2*

----- End of test report -----