

TEST REPORT IEC 61730-2 PV Module Safety Qualification – Part 1: Requirements for construction and Part 2: Requirements for testing	
Report Number.....	6264358A.50
Date of issue.....	2026-04-17
Total number of pages.....	6
Name of Testing Laboratory preparing the Report	DEKRA Testing and Certification (Shanghai) Ltd.
Applicant's name	Sungrow Renewables Development Co., Ltd.
Address.....	No.2 Tianhu Road, Gaoxin District 230088 Hefei City, Anhui China
Test specification: Standards : IEC 61730-2:2023 Test procedure : Client specified Non-standard test method : N/A	
Test Report Form No.	IEC61730_2F
Test Report Form(s) Originator	DEKRA Testing and Certification (Shanghai) Ltd.
Master TRF	2019-05-20
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Test item description	Photovoltaic (PV) Module(s)	
Trademark	Sungrow	
Manufacturer	Sungrow Renewables Development Co., Ltd.	
Address	No.2 Tianhu Road, Gaoxin District 230088 Hefei City, Anhui China	
Model/Type reference	SG-54TG4D-xxx SG-54TG4D-X-xxx SG-48TG4D-xxx SG-48TG4D-B-xxx SG-48TG4D-X-xxx	
Ratings	N/A	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☐	CB Testing Laboratory:	DEKRA Testing and Certification (Shanghai) Ltd.
Testing location/address.....:		3F #250, Jiangchangsan Road, Building 16, Headquarter Economy Park Shibe Hi-Tech Park, Jing'an District, Shanghai, 200436, P.R. China
Tested by (name, function, signature)		Christy Zhu 
Approved by (name, function, signature)....:		Kevin Lu 

List of attachments (including a total number of pages in each attachment):	
	attachment number / number of pages
Installation manual:	
Drawings mechanical:	
Circuit diagram:	
Photographs:	
Component datasheets / certificates	
Others:	
List of measurement equipment	
Summary of testing:	
Tests performed (name of test and test clause): Fire test (MST 23)	Test location: LEADING EDGE CONSTRUCTION MATERIALS TESTING COMPANY LIMITED Asia Aluminum Industrial City, The New High-Tech Industrial Development Zone, Dawang, Zhaoqing, Guang Dong Province, China

Test item particulars..... :	
Accessories and detachable parts included in the evaluation	N/A
Mounting system used	with default mounting method
Other options included	N/A
Possible test case verdicts:	
- test case does not apply to the test object.....	N/A
- test object does meet the requirement.....	P (Pass)
- test object does not meet the requirement	F (Fail)
Abbreviations used in the report:	
P _{max} – Maximum power	HF – Humidity Freeze
V _{mp} – Maximum power voltage	DH – Damp Heat
I _{mp} – Maximum power current	TC – Thermal Cycling
I _{sc} – Short circuit current	α – Current temperature coefficient
V _{oc} – Open circuit voltage	β – Voltage temperature coefficient
FF – Fill factor	δ – power temperature coefficient
STC – Standard Test Conditions (25°C, 1 000 W/m ²)	
V _{FM} – Measured diode(s) forward voltage	V _{FM} rated – Rated diode(s) forward voltage
MQT – Module Quality Tests	NP – Nameplate
m ₁ – the measurement uncertainty in % of laboratory for P _{max}	m ₂ – the measurement uncertainty in % of laboratory for V _{oc}
m ₃ – the measurement uncertainty in % of laboratory for I _{sc}	t ₁ – the manufacturer's rated lower production tolerance in % for P _{max}
t ₂ – the manufacturer's rated upper production tolerance in % for V _{oc}	t ₃ – the manufacturer's rated upper production tolerance in % for I _{sc}
r – P _{max} measurement reproducibility	
BNPI – Bifacial nameplate irradiance	BSI – Bifacial stress irradiance
G _{BNPI} – Equivalent bifacial nameplate irradiance	aBSI – Applied bifacial stress irradiance
φ – Bifaciality refers to the ratios between the main I-V characteristics of the rear side and the front side of a bifacial device, typically at Standard Test Conditions (STC) unless otherwise specified. It is quantified with reference to bifaciality coefficients, namely as φ.	
φ _{Pmax} – Maximum power bifaciality coefficient	φ _{Voc} – Open-circuit voltage bifaciality coefficient
φ _{Isc} – Short-circuit current bifaciality coefficient	
Testing Dates [YYYY-MM-DD]	
Date of first test item received	2026-04-06
Dates of tests (beginning/end).....	2026-04-08 / 2026-04-09

General remarks:

According to the inquiry, test procedure was in accordance with IEC 61730-2:2023.

Test procedure is according to client's requirements. Test results are documented within this test report.

"(See Enclosure #)" refers to additional information appended to the report.

"(See appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Name and address of factory (factories).....:	Sungrow Renewables Development Co., Ltd. No.2 Tianhu Road, Gaoxin District 230088 Hefei City, Anhui China
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Product Electrical Ratings:

Module type	-	-	-	-
Voc [V] /Tolerance	-	-	-	-
Vmp [V]	-	-	-	-
Imp [A]	-	-	-	-
Isc [A] /Tolerance	-	-	-	-
Pmp [W] /Tolerance	-	-	-	-
Maximum system voltage [V]	-	-	-	-
Maximum Over- Current Protection Rating [A]	-	-	-	-

Remarks: N/A

Module group assignment:

Sample #	Sample Group ID	Type/model	Sample S/N	Remark
1	Fire test	SG-48TG4D-450	NSG012026022601389	N/A
2	Fire test	SG-48TG4D-450	NSG012026022601387	N/A
3	Fire test	SG-54TG4D-510	NSG012026032001971	N/A
4	Fire test	SG-54TG4D-510	NSG012026032001974	N/A

Remarks: N/A

Sample #	1, 2, 3, 4	
Table 1: MST 23 - Fire test		
Test Date [YYYY-MM-DD]	2026-04-08 (Sample #1, 3) 2026-04-09 (Sample #2, 4)	—
Module fire resistance class (A, B, C)	A	—
No. of modules provided to create the test assembly	4	—
☒ The module complies with the requirements for the fire resistance class		P
Supplementary information: Sample #1, 3 for spread of flame test, Sample #2, 4 for burning brand test.		