Test Report issued under the responsibility of:

DEKRA

TEST REPORT
IEC 61730-2
PV Module Safety Qualification – Part 1: Requirements for construction and Part 2: Requirements for testing

Report Number. ..... :	**6230898B.50**
Date of issue ..... :	**2025-07-17**
Total number of pages ..... :	**6**
Name of Testing Laboratory preparing the Report ..... :	**DEKRA Testing and Certification (Shanghai) Ltd.**
Applicant's name ..... :	**Trina Solar Co., Ltd.**
Address ..... :	**No.2 TianHe Road, Trina PV Industrial Park, New District, 213031 Changzhou City Jiangsu, 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

General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description ..... :	Photovoltaic (PV) Module(s)
Trade Mark ..... :	Trinasolar
Manufacturer ..... :	Trina Solar Co., Ltd.
Address ..... :	No.2 TianHe Road, Trina PV Industrial Park, New District, 213031 Changzhou City Jiangsu, China
Model/Type reference ..... :	TSM-445NED9R.28
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 Shibei 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:	
Pmax – Maximum power	HF – Humidity Freeze
Vmp – Maximum power voltage	DH – Damp Heat
Imp – Maximum power current	TC – Thermal Cycling
Isc – Short circuit current	α – Current temperature coefficient
Voc – Open circuit voltage	β – Voltage temperature coefficient
FF – Fill factor	δ – power temperature coefficient
STC – Standard Test Conditions (25°C, 1 000 W/m²)	
VFM – Measured diode(s) forward voltage	VFMrated – Rated diode(s) forward voltage
MQT – Module Quality Tests	NP – Nameplate
m_1 – the measurement uncertainty in % of laboratory for Pmax	m_2 – the measurement uncertainty in % of laboratory for Voc
m_3 – the measurement uncertainty in % of laboratory for Isc	t_1 – the manufacturer's rated lower production tolerance in % for Pmax
t_2 – the manufacturer's rated upper production tolerance in % for Voc	t_3 – the manufacturer's rated upper production tolerance in % for Isc
r – Pmax 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 ..... :	2025-06-23
Dates of tests (beginning/end) ..... :	2025-06-24 / 2025-06-24

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).....:	Trina Solar Co., Ltd. No.2 TianHe Road, Trina PV Industrial Park, New District, 213031 Changzhou City Jiangsu, China

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	TSM-445NED9R.28	K03250588800070	N/A
2	Fire test	TSM-445NED9R.28	K03250588800079	N/A
Remarks: N/A				

Sample #:	1, 2	
Table 1: MST 23 - Fire test		
Test Date [YYYY-MM-DD] .....:	2025-06-24	—
Module fire resistance class (A, B, C) .....:	A	—
No. of modules provided to create the test assembly .....:	2	—
☒ The module complies with the requirements for the fire resistance class		P
Supplementary information: Sample #1 for spread of flame test, Sample #2 for burning brand test. Fire Rating is Class A according to UL790.		