Prüfbericht-Nr.: *Test report no.*:	**CN252IMD 001**	**Auftrags-Nr.:** *Order no.*:	326122608	
Kunden-Referenz-Nr.: *Client reference no.*:	2050703	**Auftragsdatum:** *Order date:*	29/07/2025	
Auftraggeber: *Client*:	LONGi Green Energy Technology Co., Ltd. No. 388, Middle Hangtian Road, Chang'an District, Xi'an, 710100 Shaanxi, P.R.China			
Prüfgegenstand: *Test item*:	Photovoltaic (PV) module			
Bezeichnung / Typ-Nr.: *Identification / Type no.*:	See module type designation on page 3			
Auftrags-Inhalt: *Order content*:	Fire test of photovoltaic (PV) modules			
Prüfgrundlage: *Test specification*:	Photovoltaic (PV) modules Spread of fire test and Burning brand test according to UL 790			

Wareneingangsdatum: *Date of sample receipt*:	01/08/2025
Prüfmuster-Nr.: *Test sample no:*	See clause 6
Prüfzeitraum: *Testing period*:	02/08/2025 - 07/08/2025
Ort der Prüfung: *Place of testing*:	Refer to page 3
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shanghai) Co., Ltd.
Prüfergebnis*: *Test result**:	Pass

geprüft von: *tested by:*	X Zexuan Fang	**genehmigt von:** *authorized by*:	X Angel Wong
Datum: *Date:* 08/08/2025		**Ausstellungsdatum:** *Issue date:* 08/08/2025	
Stellung / Position:	Project Engineer	**Stellung** / Position:	Authorizer

Sonstiges / *Other*: Samples fulfilled the requirement of Class A Spread of flame test and Class A Burning brand test according to UL790.

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery*: Prüfmuster vollständig und unbeschädigt / *Test item complete and undamaged*

* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* *Legend:*	*P(ass) = passed a.m. test specification(s)*	*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.
This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.

Prüfbericht-Nr.: CN252IMD 001
Test report no.:

Liste der verwendeten Prüfmittel
List of used test equipment

Prüfmittel *Test equipment*	**Prüfmittel-Nr. / ID-Nr.** *Equipment No. / ID-No.*	**Nächste Kalibrierung** *Next calibration*
Visualinspection platform	GF-24 WGCS-1	22/10/2025
Irrradianceeililluminometer	GF-28 1010A	29/12/2025
steelmeasuringgttape	GF-171 TAJIMA	22/12/2025
Photovoltaic module combustiontest system	GF-112-1 SCF	05/12/2025
Electronic balance	GF-190 LBA-5200	09/12/2025
Mechanical stopwatch	GF-120803	09/12/2025
Hygrothermograph	GF-270-3 TH20R	09/12/2025
Handheld wind speedtester	GGF-112-21340	16/05/2026
Electrothermal blowing dry box	GF-112-8B1101-0A	03/04/2026

Produktbeschreibung
Product description

I	**General**	
1	**Product details**	
1.1	**Module type designation**	
	With ½ cut of mono c-Si cells: LR7-54HVD-xxxM (xxx=475-495, in steps of 5, 108 cells, Pmax@BNPI= 520-542) xxx represents output power in Wp	
1.2	**Intended use**	
	PV modules are installed in the following special applications:	
	Building attached PV (BAPV)	☐ yes ☒ no
	Building integrated PV (BIPV)	☐ yes ☒ no
	Applications in areas with snow and / or wind load exceeding loads as tested in UL 61730-2	☐ yes ☒ no
	Applications at environmental temperature exceeding the limits indicated in UL 61730-1	☐ yes ☒ no
	Other (please specify)	☐ yes, as follows: ☒ no
2	**Summary of test results** Totally 1 set of PV modules listed in page 4 were subjected to the fire test of UL 790 and the results were passed according to the pass criteria requirements of UL 790. Test locations: Visual check was performed by TÜV Rheinland (Suzhou) Co., Ltd. Fire test (MST 23) was performed at China Testing & Certification International Group Co., Ltd., China Photovoltaic Product Test Center, which is located at No.1, South side of Yanmi Road, economic development zone, Miyun District, Beijing, P.R. China	

Absatz	**Photovoltaic (PV) modules**	Messergebnisse - Bemerkungen	Ergebnis
Clause	Anforderungen - Prüfungen / *Requirements - Tests*	*Measuring results - Remarks*	*Result*

3	**Test specification**		
	IEC 61730-2:2023: Photovoltaic (PV) module safety qualification – Part 2: Requirements for testing-MST 23	applicable	—

4	**List of test samples**			
☒ The modules tested were taken at random from a production batch and subjected to manufacturer's normal quality control and inspection for safety testing				—
☐ The modules tested were prototypes of a new design and not taken from a production batch.				
Module type: LR7-54HVD-475M				
Sample no.	Sample SN	Test sequence	Remarks / constructional characteristics (e.g. cell, backsheet, frame type)	
1	LRP010055250501500124	Fire	Samples are Mono c-Si module with 108 pcs cells and Al-frame	
2	LRP010055250501501392	Fire		
Remark: N/A				

5	**Overview of tests and test results**

Test	Remarks	Result
Visual inspection (initial) – MQT 01	See table 6	P
Fire test (UL 790)	See table 7	P

Absatz	**Photovoltaic (PV) modules**	Messergebnisse - Bemerkungen	Ergebnis
Clause	Anforderungen - Prüfungen / *Requirements - Tests*	*Measuring results - Remarks*	*Result*

6.1	**Visual inspection (initial) – MQT 01**		
Test date (dd/mm/yyyy)	08/08/2025		—
Sample no.	Requirement	Nature and position of initial findings	
1	No major visual defects	No major visual defects	P
2		No major visual defects	P
Supplementary information: N/A			

7	**Fire test – MST 23 (acc. to UL 790)**			
7.1	**Spread of flame test**			
Test date (dd/mm/yyyy)		06/08/2025		—
Sample no.		1		
Fire class test specification		A		
Test results				
Did any portion of the module blow off or fall off the test deck in the form of flaming / glowing brands?		☐ Yes	☒ No	P
Did any portion of the roof desk fall away in the form of glowing particles?		☐ Yes	☒ No	
Was the flame spread beyond 1.82m for Class A, 2.40m for Class B or 3.96m for Class C?		☐ Yes	☒ No	
Was there a significant lateral spread-of-flame from the path directly exposed to the test flame?		☐ Yes	☒ No	
Supplementary information: N/A				

7.2	**Burning brand test**			
Test date (dd/mm/yyyy)		07/08/2025		—
Sample no.		2		
Fire class test specification		A		
Test results				
Did any portion of the module blow off or fall off the test deck in the form of flaming / glowing brands?		☐ Yes	☒ No	P
Did any portion of the roof desk fall away in the form of glowing particles?		☐ Yes	☒ No	
Did the brand burn a hole through the roof covering or through any part of the module?		☐ Yes	☒ No	
Did any sustained flaming of the module occur?		☐ Yes	☒ No	
Supplementary information: N/A				

Absatz	**Photovoltaic (PV) modules**	Messergebnisse - Bemerkungen	Ergebnis
Clause	Anforderungen - Prüfungen / *Requirements - Tests*	*Measuring results - Remarks*	*Result*

7.3	**Fire type classification result**
Module type	Mono c-Si Module
Module dimension [mm]	1800 × 1134 × 30
Thickness of front cover (superstrate) [mm]	2.0 mm
Thickness of back cover (substrate) [mm]	1.6 mm
Material of back cover (substrate)	Glass
Frame material	Aluminum alloy
Best passed class of Spread of flame test	Class A
Best passed class of Burning brand test	Class A
Supplementary information: Above information is provided by client.	

FOTO-DOKUMENTATION
PHOTO DOCUMENTATION

Appendix: Photos

Fig. 1: Front view of test sample

Fig. 2: Rear view of test sample

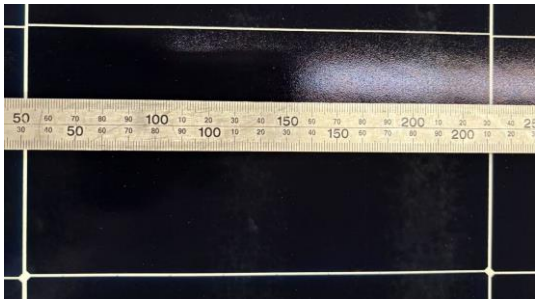

Fig. 3: Detail view of solar cell

Fig. 4: Detail view of closed junction box