TEST REPORT

Report Number. ..... :	**6092731.52**
Date of issue ..... :	**2020-12-30**
Total number of pages ..... :	**13**
Name of Testing Laboratory preparing the Report ..... :	**DEKRA Testing and Certification (Shanghai) Ltd.**
Applicant's name ..... :	**Chint Solar (Zhejiang) Co., Ltd.**
Address ..... :	**1335 Bin An Rd, Binjiang District, Hangzhou, Zhejiang, 310053, P.R. China**
Test specification:	
Standard ..... :	Refer to IEC 61215-2: 2016,
Test procedure ..... :	Client specified
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	DEKRA Specified Test_1.0
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.

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**Testing Laboratory:**	DEKRA Testing and Certification (Shanghai) Ltd.	
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).....:		Derrick Wang	
Approved by (name, function, signature)...:		Kevin Lu	

List of Attachments (including a total number of pages in each attachment):	
	attachment number
Installation manual	
Drawings mechanical	
Circuit diagram	
Component datasheets / certificates	
Others:	
Photographs of test sample	Annex 1
EL Image	Annex 2
List of test equipment used	Annex 3

Summary of testing:	
Tests performed (name of test and test clause): Visual inspection (MQT 01) Maximum power determination (MQT 02) Hail test (MQT 17)	**Testing location:** Changzhou HuaYang Inspection and Testing Technology Co., Ltd. No.8 Lanxiang Road, Wujin Economic Development Zone, Changzhou, Jiangsu, P.R.China

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	STC – Standard Test Conditions (25°C, 1 000 W/m²)
Vmp – Maximum power voltage	α – Current temperature coefficient
Imp – Maximum power current	β – Voltage temperature coefficient
Isc – Short circuit current	δ – power temperature coefficient
Voc – Open circuit voltage	
FF – Fill factor	
LI – Low irradiance	
MQT – Module Quality Tests	
Uncertainty of test laboratory:	
Changzhou HuaYang Inspection and Testing Technology Co., Ltd. The total measuring uncertainty of Pmpp is ≤ 2.12% The total measuring uncertainty of Isc is ≤ 2.26% The total measuring uncertainty of Voc is ≤ 0.98%	
Testing Dates (YYYY-MM-DD)	
Date of first test item received ..... :	2020-12-14
Dates of tests (beginning/end)..... :	2020-12-14 / 2020-12-17

GENERAL REMARKS:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. Sampling: The test samples were chosen under the supervision by DEKRA randomly from production line. Throughout this report a ☐ comma / ☒ point is used as the decimal separator.	
Name and address of factory (factories) ..... :	Chint Solar (Zhejiang) Co., Ltd. 1335 Bin An Rd, Binjiang District, Hangzhou, Zhejiang, 310053, P.R. China

PRODUCT ELECTRICAL RATINGS:			
Module type	CHSM72M-HC-535		
Voc [V]	49.50±3%		
Isc [Adc]	13.61±5%		
Pmp [W]	535		
Maximum system voltage [V]	1500		
Maximum Over-Current Protection Rating [A]	25		
Note: -			

MODULE GROUP ASSIGNMENT:			
Sample #	Type/model	Sample S/N	Remark
1	CHSM72M-HC-535	2960637302201375	HI 45mm
Supplementary information: -			

4. TESTING OVERVIEW		—
Visual inspection (MQT 01)	See Table 01	—
Maximum power determination (MQT 02)	See Table 02	—
Hail test (MQT 17)	See Table 19.8	—

TABLE 01: MQT 01 - Visual inspection		P
Test Date [YYYY-MM-DD]..... :	2020-12-14	—
Sample #	Nature and position of initial findings – comments or attach photos	—
1	No major visual defects found	P
Supplementary information:N/A		

TABLE 02: MQT 02 - Maximum power determination							
Test Date [YYYY-MM-DD].....:	2020-02-14						—
Module temperature [°C]	25						—
Irradiance [W/m²).....	1000						—
Test method.....:	☒ Simulator ☐ Natural sunlight						—
Sample #	Isc [A]	Voc [V]	Imp [A]	Vmp [V]	Pmax [W]	FF [%]	Result
1	13.621	49.498	13.032	41.243	537.489	79.72	—

TABLE 19.8: MQT 17 - Hail impact test							
Test Date [YYYY-MM-DD] ..... :	2020-12-16						—
Sample #	24						—
Ice ball size [mm] ..... :	1	2	3	4	5	6	—
	44.8	44.5	44.4	44.6	44.8	44.7	
	7	8	9	10	11		
	44.6	44.8	44.7	44.6	44.8		
Ice ball weight [g] ..... :	1	2	3	4	5	6	—
	42.9	43.5	42.9	43.4	43.0	42.1	
	7	8	9	10	11		
	42.3	43.4	43.6	43.9	42.8		
Ice ball velocity [m/s] ..... :	1	2	3	4	5	6	—
	30.5	30.3	30.4	30.1	30.9	30.5	
	7	8	9	10	11		
	30.5	30.3	30.8	30.8	30.2		
Number of impact locations ..... :	11						—

Supplementary information: (impact location descriptions)

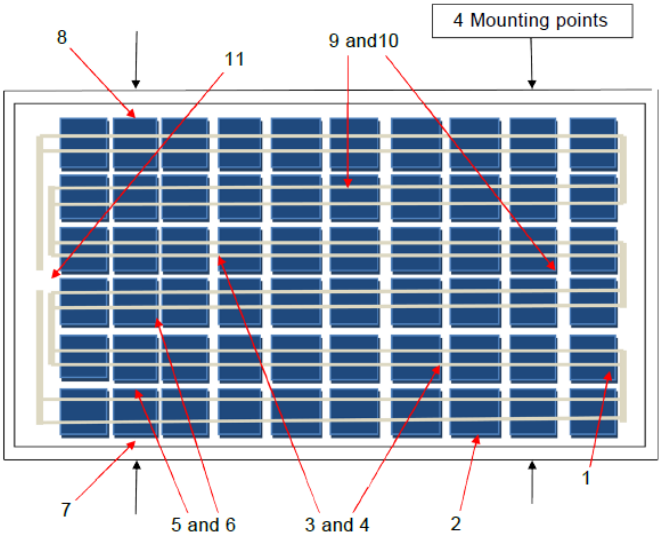


TABLE 18.1: MQT 01 - Visual inspection after hail impact test		
Test Date [YYYY-MM-DD].....:	2020-12-17	—
Sample #	Nature and position of initial findings – comments or attach photos	—
1	No major visual defects found	P
Supplementary information:		

TABLE 02: MQT 02 - Maximum power determination after Hail impact test							
Test Date [YYYY-MM-DD]..... :	2020-12-17						—
Module temperature [°C].....	25						—
Irradiance [W/m^2)	1000						—
Test method ..... :	☒ Simulator ☐ Natural sunlight						—
Sample #	Isc [A]	Voc [V]	Imp [A]	Vmp [V]	Pmax [W]	FF [%]	Degradation [%]
1	13.600	49.485	13.004	41.188	535.593	79.58	-0.35

Annex 1: Photographs of test sample

Module type: CHSM72M-HC-535

Fig. 1: front view of test sample

Fig. 2: rear view of test sample

Fig. 3: view of junction box

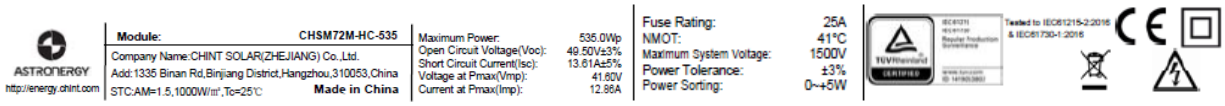
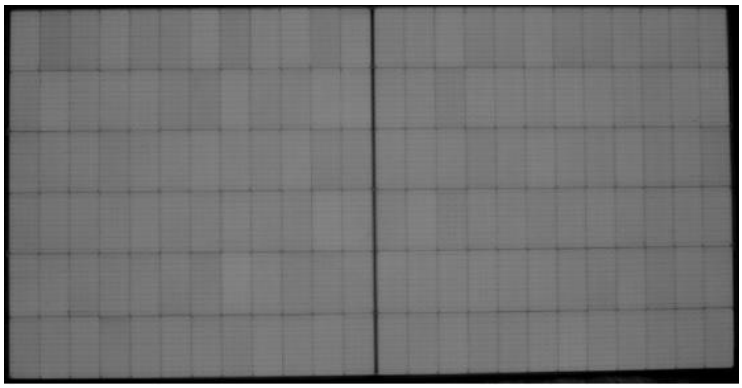
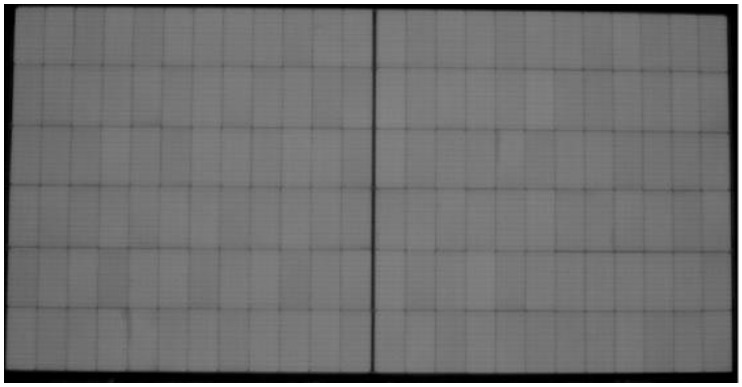


Fig. 4: view of Label

Annex 2: EL Image



Sample 1 Initial



Sample 1 Final

Annex 3: List of measurement equipment

Clause	Measurement / testing	Testing / measuring equipment / material used, (Equipment ID)	Range used	Last Calibration date	Calibration due date
4.1	Visual inspection	Visual inspection table HYJC-YS-033	/	2020.09.15	2021.09.14
		Illumination photometer HYJC-YS-070	0～40.0klux	2020.08.15	2021.08.14
4.2	Maximum power determination	Module pulse simulator HYJC-YS-021	AAA	2020.12.20	2021.12.19
4.3	Insulation test	Programmable control voltage insulation meter HYJC-YS-155	0-1500V	2020.09.15	2021.09.14
4.6	Performance at STC and NMOT	Module pulse simulator HYJC-YS-021	AAA	2020.12.20	2021.12.19
4.4	Hail test	Hail tester HYJC-YS-036	/	2020.12.10	2021.12.09