TEST REPORT

Reference No.	:	WTD22D06113198W
FCC ID	:	2A7DBDM270
Applicant	:	Shenzhen Fuxin Canrui Technology Co., Ltd.
Address	:	1108, No 51, North Pingxin Road, Shangmugu, Pinghu Street, Longgang District, Shenzhen, China.
Manufacturer	:	Shenzhen Fuxin Canrui Technology Co., Ltd.
Address	:	1108, No 51, North Pingxin Road, Shangmugu, Pinghu Street, Longgang District, Shenzhen, China.
Product	:	Solar lights outdoor Leds
Model(s)	:	DM-270, DM-370, DM-570, DM-670
Standards	:	47CFR FCC Part 15 Subpart B
Date of Receipt sample	:	2022-06-13
Date of Test	:	2022-06-13 to 2022-06-14
Date of Issue	:	2022-06-21
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company.The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Approved by:

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2 Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD22D06113198W	2022-06-13	2022-06-13 to 2022-06-14	2022-06-21	Original	-	Valid

3 General Information

3.1 General Description of E.U.T.

Product	:	Solar lights outdoor Leds
Model(s)	:	DM-270, DM-370, DM-570, DM-670
Model Difference	:	The circuit, appearance and function of all models are completely the same. Only the model names are different due to different packaging method of shipment.
Remark	:	Model DM-270 was tested in this report.

3.2 Details of E.U.T.

Highest frequency generated	:	below 108MHz
Ratings	:	Battery: Lithium Battery 3.7Vdc, 2200mAh. Max/8.14Wh charging Voltage 4.25Vdc, Max charging current 2000mA. Solar panel: Output: 5.5Vdc, Max 2.5W Power of LEDs: Max 3.8W

3.3 Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

3.4 Abnormalities from Standard Conditions

None.

3.5 Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

4 Test Summary

Test Item	Test Requirement	Test Result
AC Power Line Conducted Emission (150kHz to 30MHz)	FCC Part 15 Subpart B section 15.107	N/A
Disturbance voltage at the antenna terminals (30MHz to 2150MHz)	FCC Part 15 Subpart B section 15.111	N/A
Radiated Emission (30MHz to 1GHz)	FCC Part 15 Subpart B section 15.109	Pass
Radiated Emission (Above 1GHz)	FCC Part 15 Subpart B section 15.109	N/A

Remark:

Pass Test item meets the requirement

Fail Test item does not meet the requirement

N/A Test case does not apply to the test object

5 Equipment Used during Test

5.1 Equipment List

3m Semi-anechoic Chamber for Radiation (TDK)						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1	Test Receiver	R&S	ESCI	101296	2022-04-28	2023-04-27
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2021-10-31	2022-10-30
3	Amplifier	ANRITSU	MH648A	M43381	2022-04-28	2023-04-27
4	Cable	HUBER+SUHNER	CBL2	525178	2022-04-28	2023-04-27

5.2 Description of Support Units

Equipment	Manufacturer	Model No.	Series No.
/	/	/	/

5.3 Measurement Uncertainty

Parameter	Uncertainty (Note 1)
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Radiated Emission(30MHz-1GHz)	±5.03dB

Note 1: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5.4 Test Mode

Test Item	Test Mode	Test Voltage
Radiated Emissions (30MHz-1GHz)	Working mode	DC 3.7V
"*" shows the worst case mode which were recorded in this report.		

6 Emission Test Results

6.1 Radiation Emission, 30MHz to 1000MHz

Test Requirement..... : FCC Part 15 Subpart B section 15.109

Test Method..... : ANSI C63.4:2014

Test Result ..... : Pass

Frequency Range..... : 30MHz to 1000MHz

Class..... : Class B

Limit..... :

Frequency (MHz)	Distance (Meter)	Limit (dBμV/m)
		Quasi-peak
30 to 88	3	40
88 to 216	3	43.5
216 to 960	3	46
960 to 1000	3	54

6.1.1 E.U.T. Operation

Operating Environment:

Temperature..... : 24.1°C

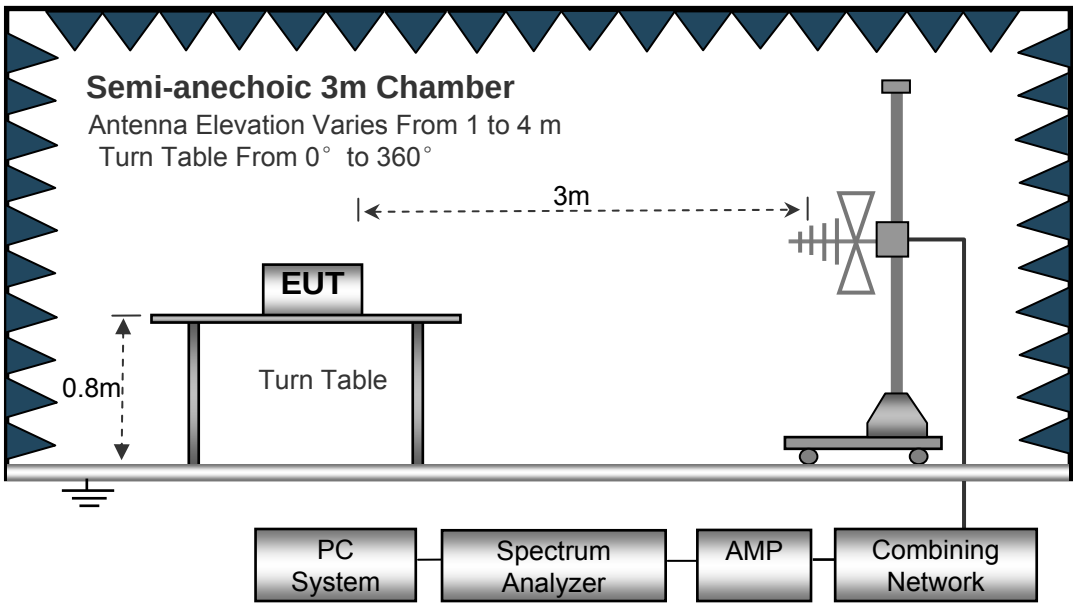
Humidity..... : 53.5%RH

Atmospheric Pressure..... : 101.2kPa

EUT Operation ..... : Refer to section 5.4.

6.1.2 Block Diagram of Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.

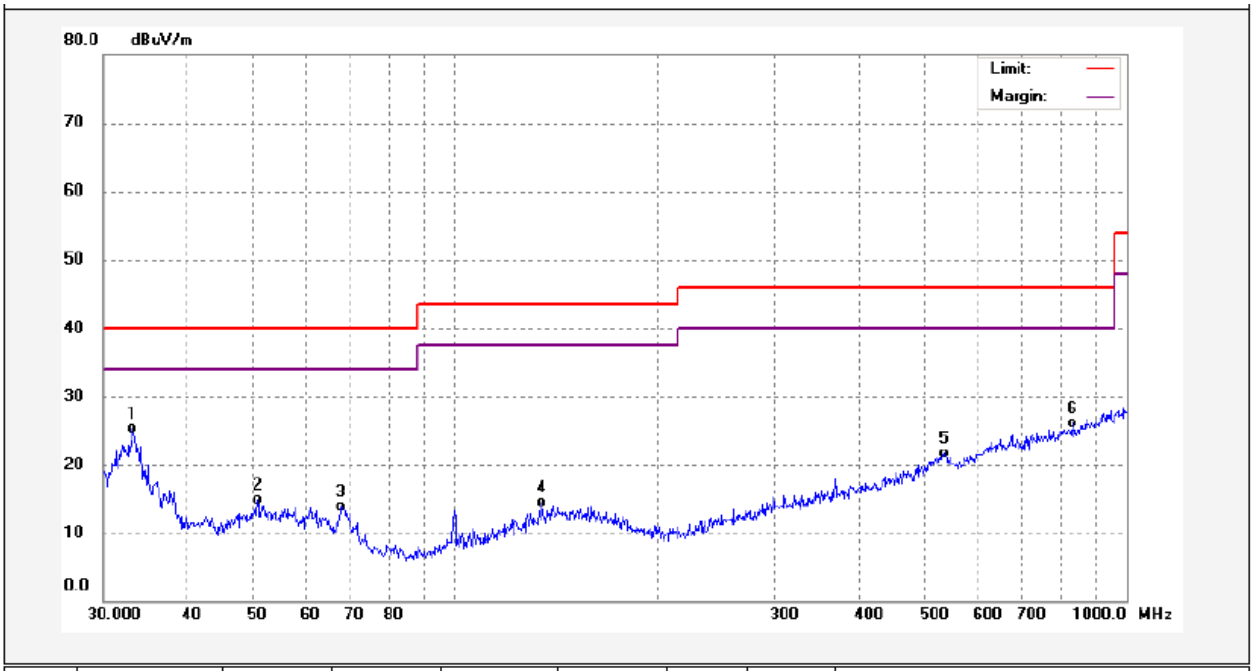


6.1.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Antenna Vertical Polarization and Antenna Horizontal Polarization. Quasi-peak measurements were performed if peak emissions were within 6dB of the Quasi-peak limit line.

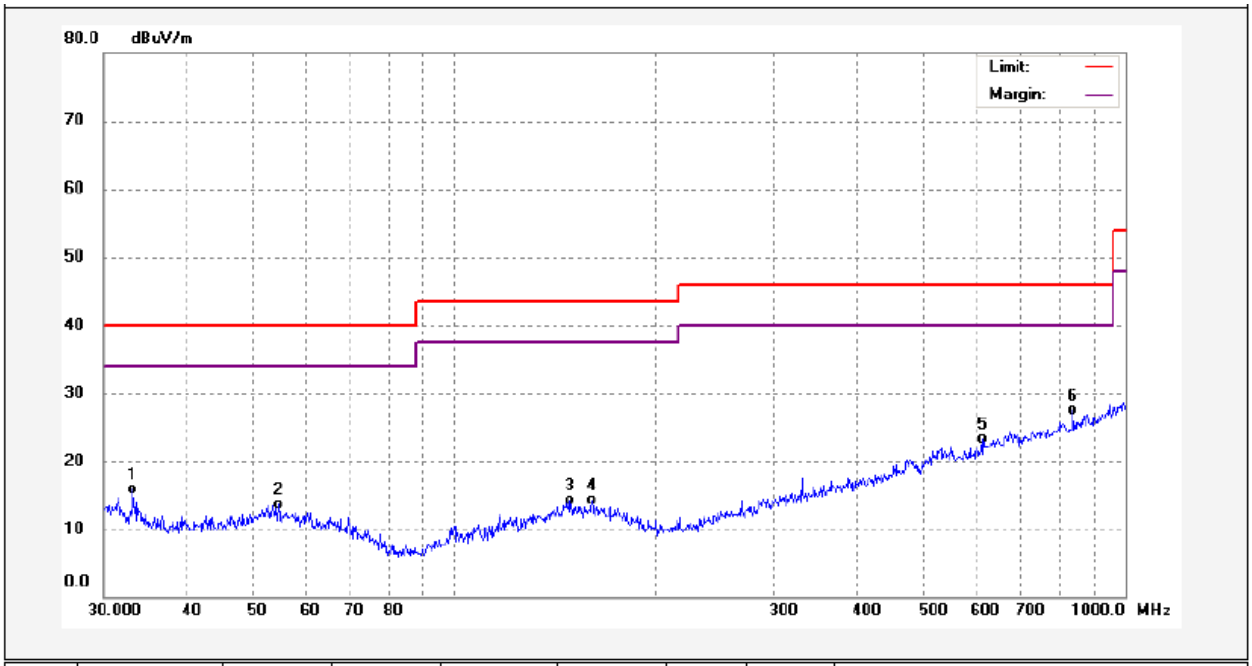
6.1.4 Radiated Emission Test Data, 30MHz to 1000MHz

Antenna Polarization: Vertical



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	33.2112	43.21	-17.99	25.22	40.00	-14.78	QP	
2	50.9419	31.68	-16.83	14.85	40.00	-25.15	QP	
3	67.9128	32.25	-18.32	13.93	40.00	-26.07	QP	
4	135.0318	30.66	-16.16	14.50	43.50	-29.00	QP	
5	535.7073	30.36	-8.58	21.78	46.00	-24.22	QP	
6	830.4001	30.30	-4.25	26.05	46.00	-19.95	QP	

Antenna Polarization: Horizontal



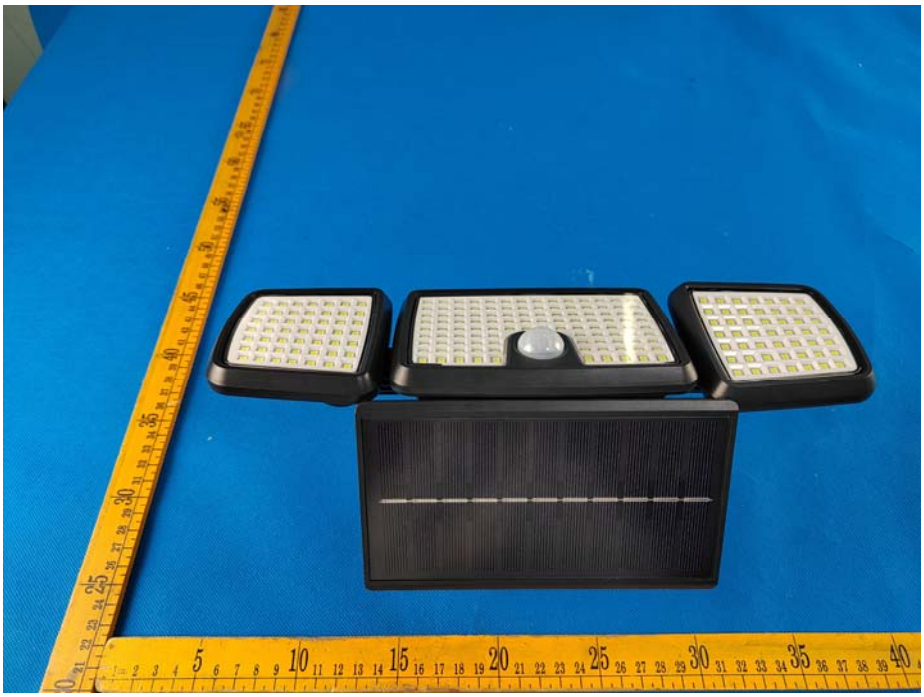
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	33.2112	33.84	-17.99	15.85	40.00	-24.15	QP	
2	54.6428	30.61	-16.99	13.62	40.00	-26.38	QP	
3	148.4410	29.67	-15.37	14.30	43.50	-29.20	QP	
4	160.3456	29.74	-15.36	14.38	43.50	-29.12	QP	
5	612.0641	30.96	-7.64	23.32	46.00	-22.68	QP	
6	836.2443	31.58	-4.13	27.45	46.00	-18.55	QP	

7 Photographs – Test Setup

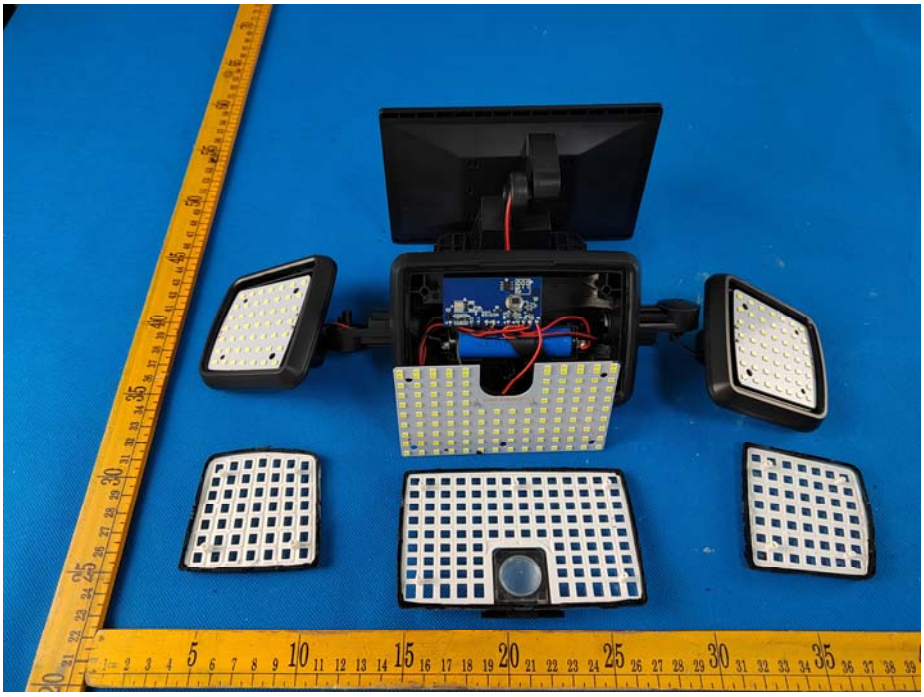
7.1 Photograph – Radiated Emission Test Setup For 30MHz-1000MHz

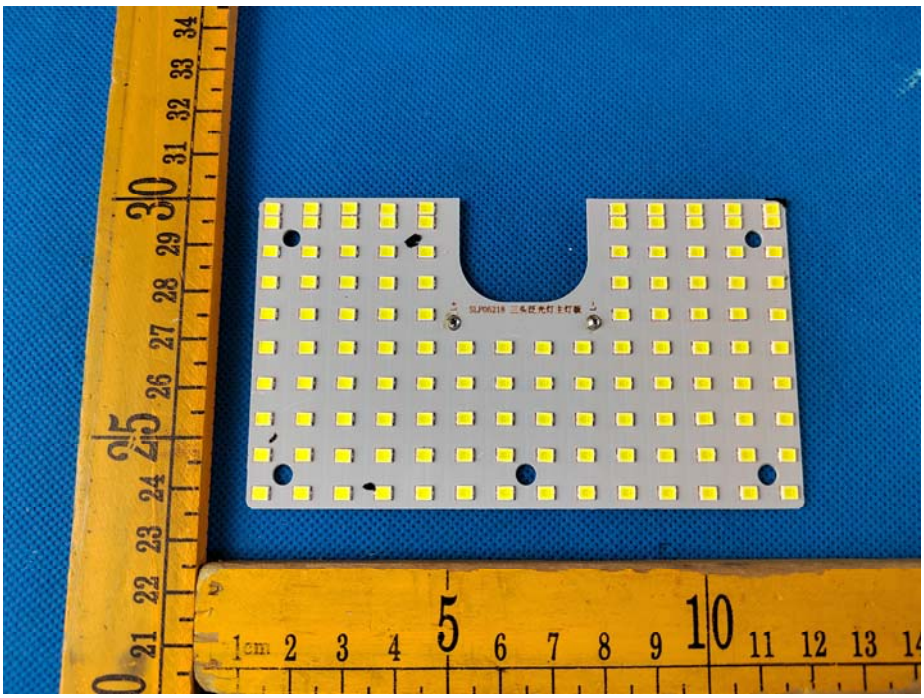
8 Photographs – Constructional Details

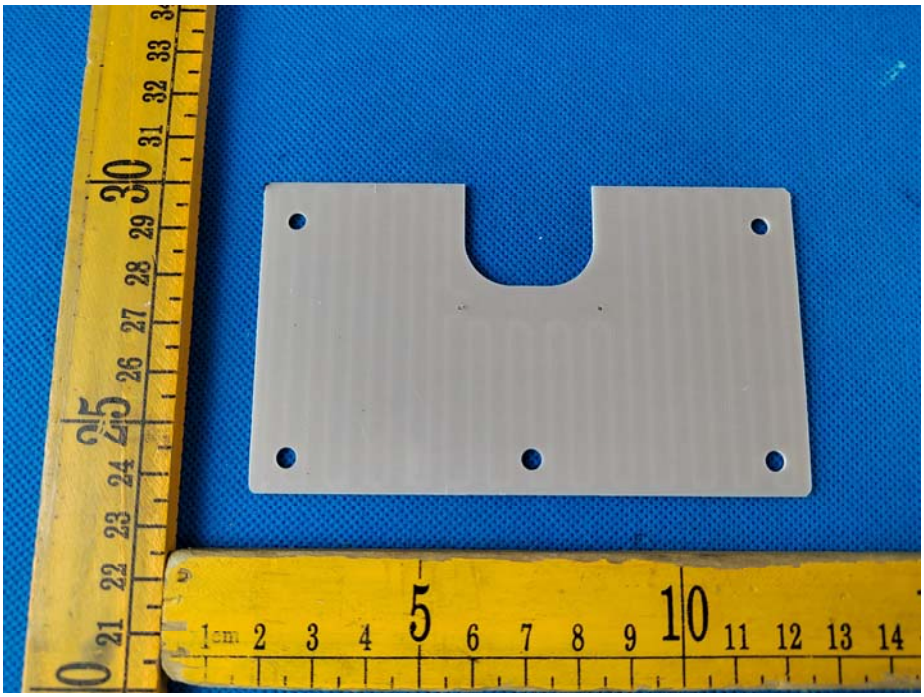
8.1 Photograph – External Photos

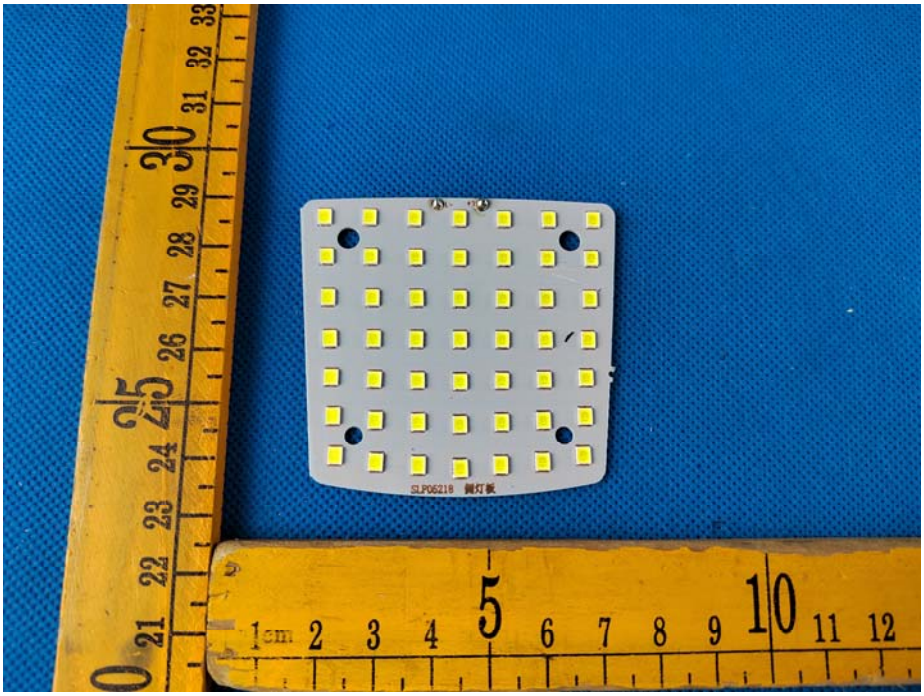


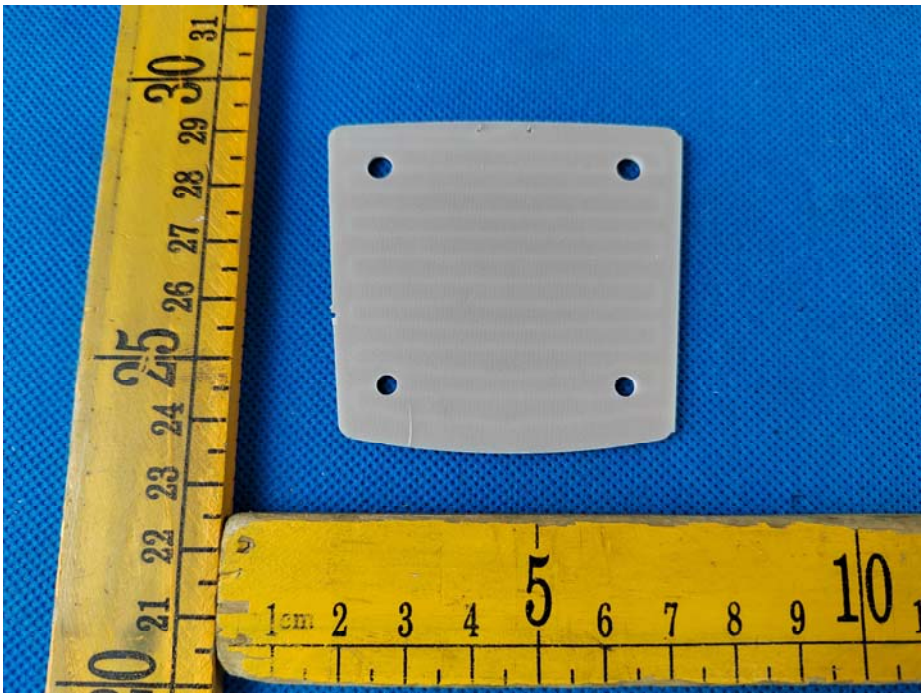
8.2 Photograph – Internal Photos

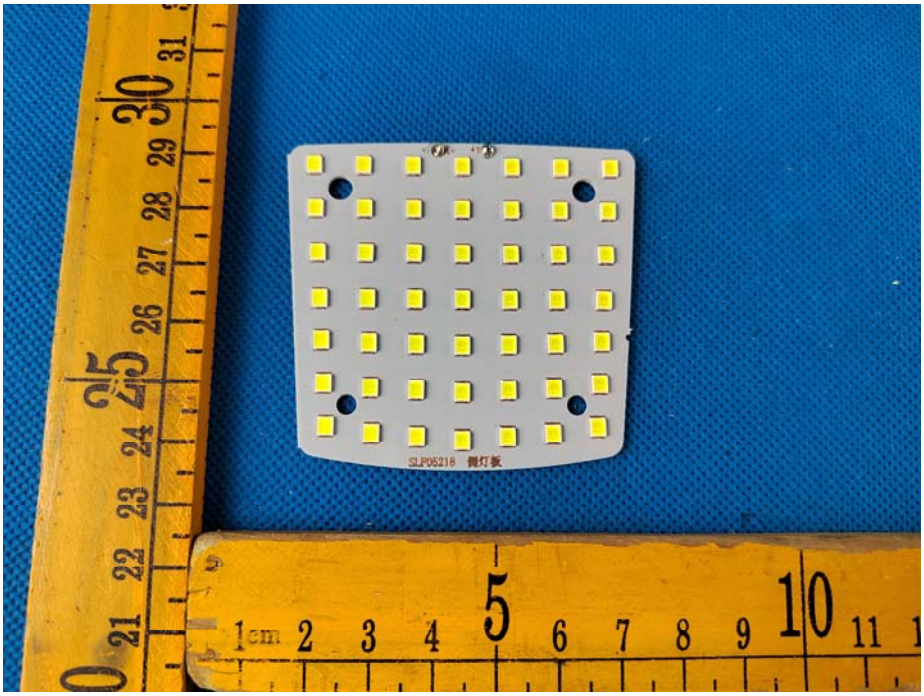


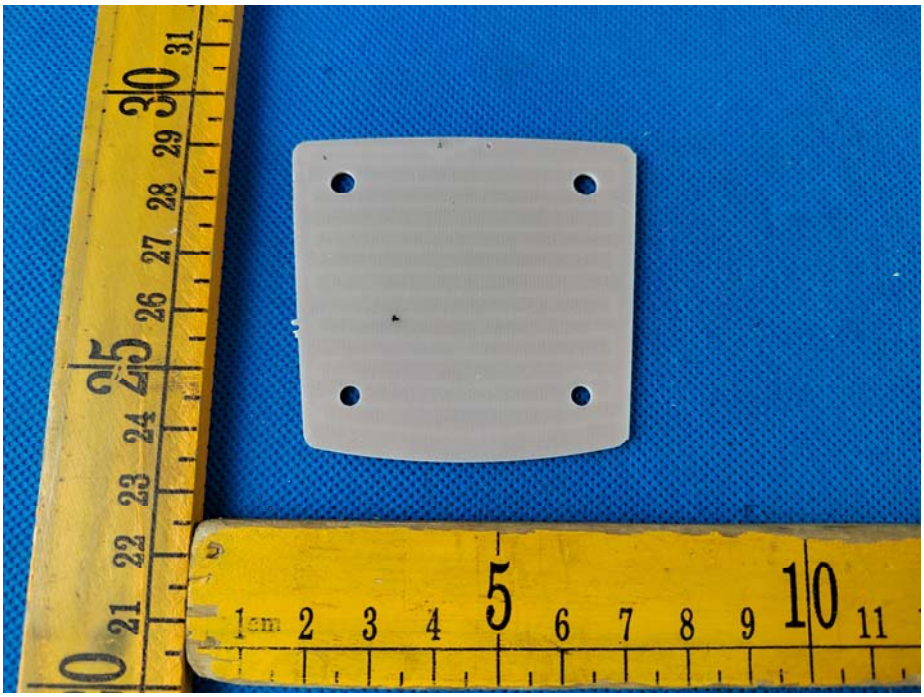


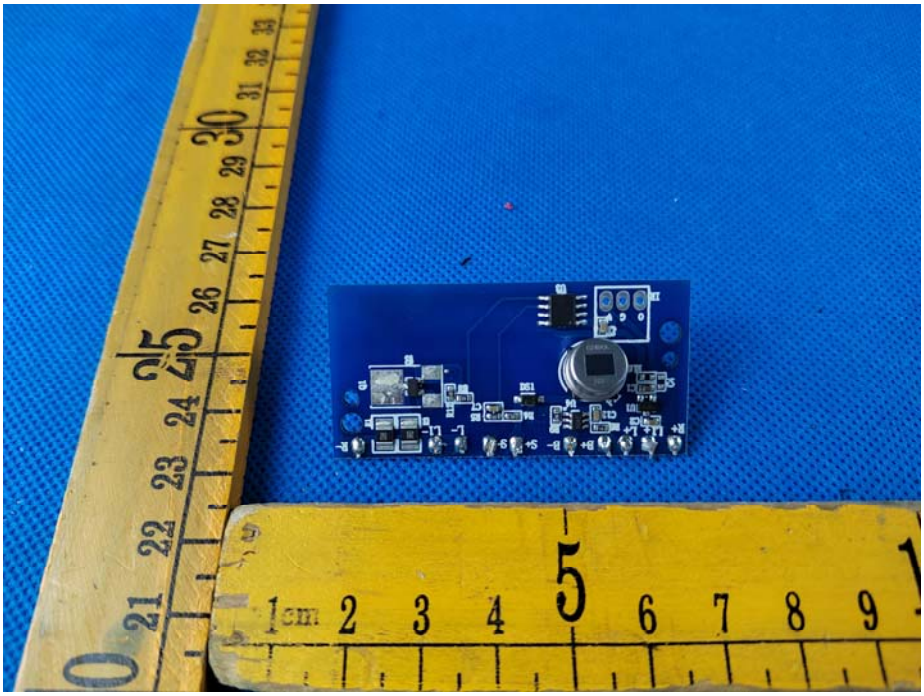


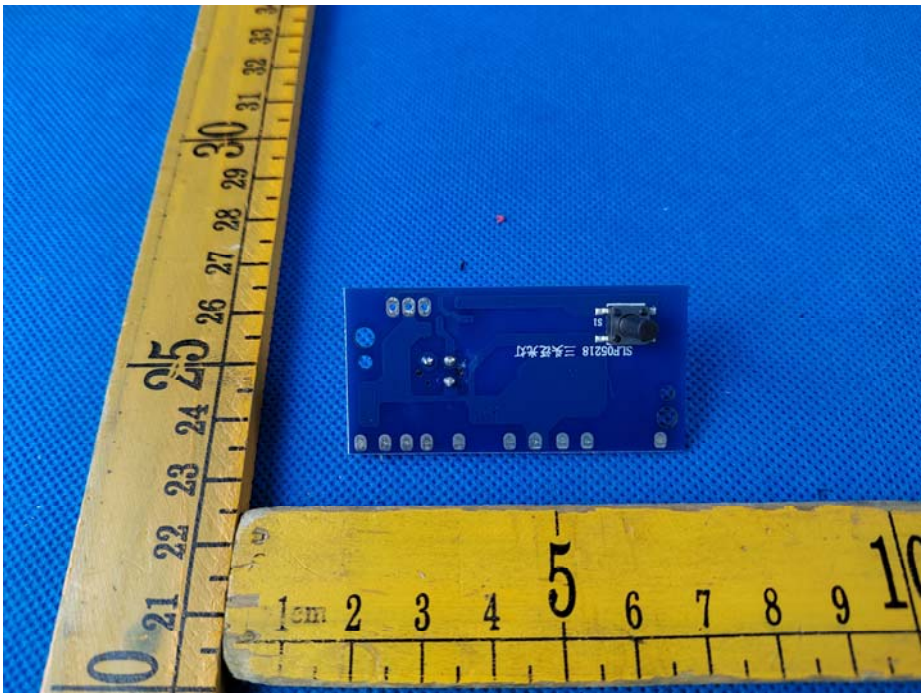












======End of Report======