



PSE TEST REPORT

For

AOK Industrial Company Limited

SOLAR STREET LIGHT

Test Model: AOK-30WsC--DC-A5-00-6570-BN-A

Additional Models : please refer to model list

Prepared for : AOK Industrial Company Limited
1/F of 1#Building, East Block of 3/F of Building 1,And 2/F of
Address : Building 4, ST George' s Science and Technology Industrial Park,
Northside of Xinyu Road,Xiangshan Community, Xinqiao Street
Baoan District,518000 Shenzhen, Guangdong, CHINA

Prepared by : Shenzhen Southern LCS Compliance Testing Laboratory Ltd.
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Date of receipt of test sample : May 06, 2024
Number of tested samples : 1
Serial number : Prototype
Date of Test : May 06, 2024 - May 09, 2024
Date of Report : May 09, 2024



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**PSE TEST REPORT****J 55015 (H29)**

Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

Report Number..... : LCSB01114033E

Date of Issue..... : May 09, 2024

Testing Laboratory Name..... : Shenzhen Southern LCS Compliance Testing Laboratory Ltd.

Address..... : 101-201, No.39 Building,Xialang Industrial Zone, Heshuikou Community, Matian Street,Guangming District, Shenzhen, China.

**Testing Procedure..... : Full application of Harmonised standards ☒
Partial application of Harmonised standards ☐
Other standard testing method ☐**

Applicant's Name..... : AOK Industrial Company Limited

Address..... : 1/F of 1#Building, East Block of 3/F of Building 1,And 2/F of Building 4, ST George' s Science and Technology Industrial Park, Northside of Xinyu Road,Xiangshan Community, Xinqiao Street Baoan District,518000 Shenzhen, Guangdong, CHINA.

Test Specification:

Standard..... : J 55015 (H29)

Test Report Form No..... : SLCSEMC-2.3

TRF Originator..... : Shenzhen Southern LCS Compliance Testing Laboratory Ltd.

Master TRF..... : Dated 2016-08

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Equipment Under Test..... : SOLAR STREET LIGHT

Trademark..... : 

Test Model/Type..... : AOK-30WsC--DC-A5-00-6570-BN-A

Rating..... : See Model List

Results : PASS

Compiled by:



Kris Mai / Engineer

Supervised by:



Amy Liu / Technique Director

Approved by:



Dm Gu / Manager



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PSE - TEST REPORT

Test Report No.....: **LCSB01114033E**

Applicant.....:	AOK Industrial Company Limited 1/F of 1#Building, East Block of 3/F of Building 1,And 2/F of Building 4, ST George' s Science and Technology Industrial Park, Northside of Xinyu Road,Xiangshan Community, Xinqiao Street Baoan District,518000 Shenzhen, Guangdong, CHINA
Address.....:	
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Address.....:	
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Fax.....:	/
Factory.....:	AOK Industrial Company Limited 1/F of 1#Building, East Block of 3/F of Building 1,And 2/F of Building 4, ST George' s Science and Technology Industrial Park, Northside of Xinyu Road,Xiangshan Community, Xinqiao Street Baoan District,518000 Shenzhen, Guangdong, CHINA
Address.....:	
Telephone.....:	/
Fax.....:	/

The applicant and manufacturer information, product name, model, trademark and other information in this report are all provided by the applicant, and this laboratory is not responsible for verifying its authenticity.

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.



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ENVIRONMENTAL CONDITIONS

The climatic conditions during the test are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. the climatic conditions during the test were in the following Limits:

Ambient temperature	15°C - 25°C
Relative Humidity air	30% - 75%

Climate values will be recorded and recorded separately if specifically required in the base standard or application product/product series standard.

POSSIBLE TEST CASE VERDICTS

Test cases does not apply to test object	N/A
Test object does meet requirement	P(Pass) / PASS
Test object does not meet requirement	F(Fail) / FAIL
Not measured	N/M

DEFINITION OF SYMBOLS USED IN THIS TEST REPORT

☒ Indicate that the conditions, standards or equipment listed is applicable to this report / test / EUT.
☐ Indicate that the conditions, standards or equipment listed is not applicable to this report / test / EUT.

REVISION HISTORY

Revision	Issue Date	Revision Content	Revised by
000	May 09, 2024	Initial Issue	-

Remark:
000) : “---”



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1. GENERAL INFORMATION

1.1. GENERAL DESCRIPTION OF THE ITEM(S)

Equipment Under Test	SOLAR STREET LIGHT
Test Model/Type	AOK-30WsC--DC-A5-00-6570-BN-A
Additional Models/Type	See Model List
Description of Model difference	See Model List
Rating	See Model List

Model List:

Declared by applicant as follows:

- All models of drives use the same circuit and PCB layout.
- All models have similar appearance and structure except power.
- This report after information review and verification, the model(s) "AOK-30WsC--DC-A5-00-6570-BN-A" were chosen as the representative model to perform all the tests.

Model	Rating	Battery	Size (LxWxH mm)
AOK-30WsC--DC-A5-00-XXYY-BN-A	LED power: 30W IP65, ta55°C, Class III	Battery: 12.8V, 18AH, 230.4WH (model: LFP 12.8V 18AH 230.4WH)	570*370*180 mm
AOK-20WsC--DC-A5-00-XXYY-BN-A	LED power: 20W IP65, ta55°C, Class III	Battery: 12.8V, 12AH, 153.6WH (model: LFP 12.8V 12AH 153.6WH)	570*370*180 mm
AOK-10WsC--DC-A5-00-XXYY-BN-A	LED power: 10W IP65, ta55°C, Class III	Battery: 12.8V, 6AH, 76.8WH (model: LFP 12.8V 6AH 76.8WH)	570*370*180 mm
Remark: "XX" represent the CCT, can be 27-65,e.g. 27=2700K, 65=6500K; "YY" represent the CRI, can be 70 or 80 or 90.			





1.2. OPERATING MODE(S) USED OF TESTS

During the tests, the following operating mode(s) has(have) been used.

Operating Mode	Operating Mode description	Used for testing
1	Lighting on mode	☒
2	Maximum light	☐
3	Minimum light	☐
4	Full load	☐

1.3. SUPPORT / AUXILIARY EQUIPMENT FOR THE EUT

EUT has been tested using the following auxiliary equipment :

Auxeq	Model/Type	Manufacturer	Supplied by
--			

1.4. DESCRIPTION OF TEST FACILITY

Test Location	Shenzhen Southern LCS Compliance Testing Laboratory Ltd. 101-201, No.39 Building,Xialang Industrial Zone, Heshuikou Community, Matian Street, Guangming District, Shenzhen, China. CNAS Registration Number is L10160.
Date of receipt of test item	May 06, 2024
Date(s) of performance of test	May 06, 2024 - May 09, 2024





2. STATEMENT OF THE MEASUREMENT UNCERTAINTY

The data and results referenced in this document are true and accurate. the reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. the measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods - Part 4: Uncertainty in EMC Measurements" and is documented in the LCS quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. the manufacturer has the sole responsibility of continued compliance of the device.

Measurement	Uncertainty (U_{lab})
Magnetic field disturbance (9kHz - 30MHz)	± 3.46 dB
Radiated disturbance (30MHz - 200MHz)	± 4.66 dB
Radiated disturbance (200MHz - 1GHz)	± 4.64 dB

Supplementary information:

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.





3. MEASURING DEVICES AND TEST EQUIPMENT

RADIATED DISTURBANCE (9KHz - 30MHz)						
Item	Test equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	No. 1 shielded Room	CHENGYU	843	/	2023-04-26	2026-04-25
2	EMI Test Receiver	R&S	ESCI	101142	2024-04-24	2025-04-23
3	10dB Attenuator	SCHWARZBECK	VTSD9561-F	9561-F159	2024-04-24	2025-04-23
4	Triple-loop Antenna	EVERFINE	LLA-2	11050003	2024-04-24	2025-04-23
5	EMI Test Software	EZ	EZ_EMG	N/A	/	/

RADIATED DISTURBANCE (above 30MHz)						
Item	Test equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2024-04-28	2027-04-27
2	EMI Test Receiver	R&S	ESCI3	101010	2024-04-24	2025-04-23
3	Log-periodic Antenna	SCHWARZBECK	VULB9163	5094	2024-04-29	2025-04-28
4	EMI Test Software	EZ	EZ_EMG	N/A	/	/
5	Controller system	SKET	SKC1000	N/A	/	/





4. VERDICT SUMMARY SECTION

This chapter present an overview of the standards and results. Refer the next chapter for details of measured test results and applied test levels.

4.1. STANDARD(S)

J 55015 (H29) - Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment.

4.2. OVERVIEW OF RESULTS

EMISSION TESTS - J 55015 (H29)		
Requirement - Test case	Limit	Verdict
Conducted Disturbance - Mains terminals	Table 2a	N/A
Conducted Disturbance - Load terminals	Table 2b	N/A
Conducted Disturbance - Control terminals	Table 2c	N/A
Radiated Disturbance in the frequency range 9 kHz to 30 MHz	Table 3a	PASS
Radiated Disturbance in the frequency range 30 MHz to 300MHz	Table 3b	PASS

Supplementary information: ---





5. EMISSION TESTS

5.1. RADIATED DISTURBANCE (9KHz - 30MHz)

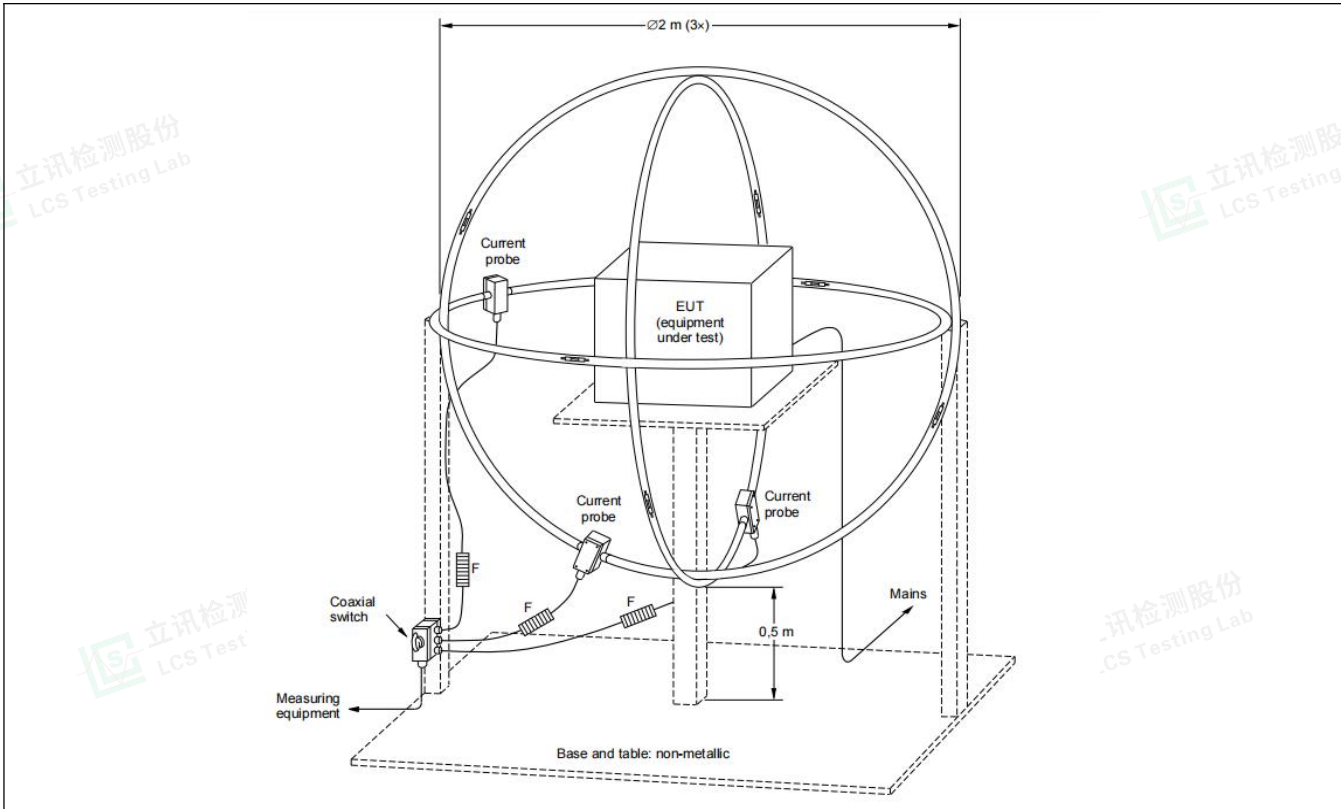
Standard	J 55015 (H29)
Basic Standard(s)	CISPR 16-2-3
Test method	Large Loop Antenna (LLA)

Radiated disturbance limits (2m)

Frequency range [MHz]	Limit: Quasi-peak [dB(μA)]	IF BW
0,009 - 0,07	88	200 Hz
0,07 - 0,15	88 - 58	200 Hz
0,15 - 3,0	58 - 22	9 kHz
3,0 - 30	22	9 kHz

- 1) At the transition frequency the lower limit applies.
2) Decreasing linearly with logarithm of the frequency.

Test configuration



Test Procedure Description

The EUT is placed on a wood table in the center of a loop antenna. the induced current in the loop antenna is measured by means of a current probe and the test receiver. Three field components are checked by means of a coaxial switch.

Test Results refer to Annex A.1





5.2. RADIATED DISTURBANCE (30MHz - 300MHz)

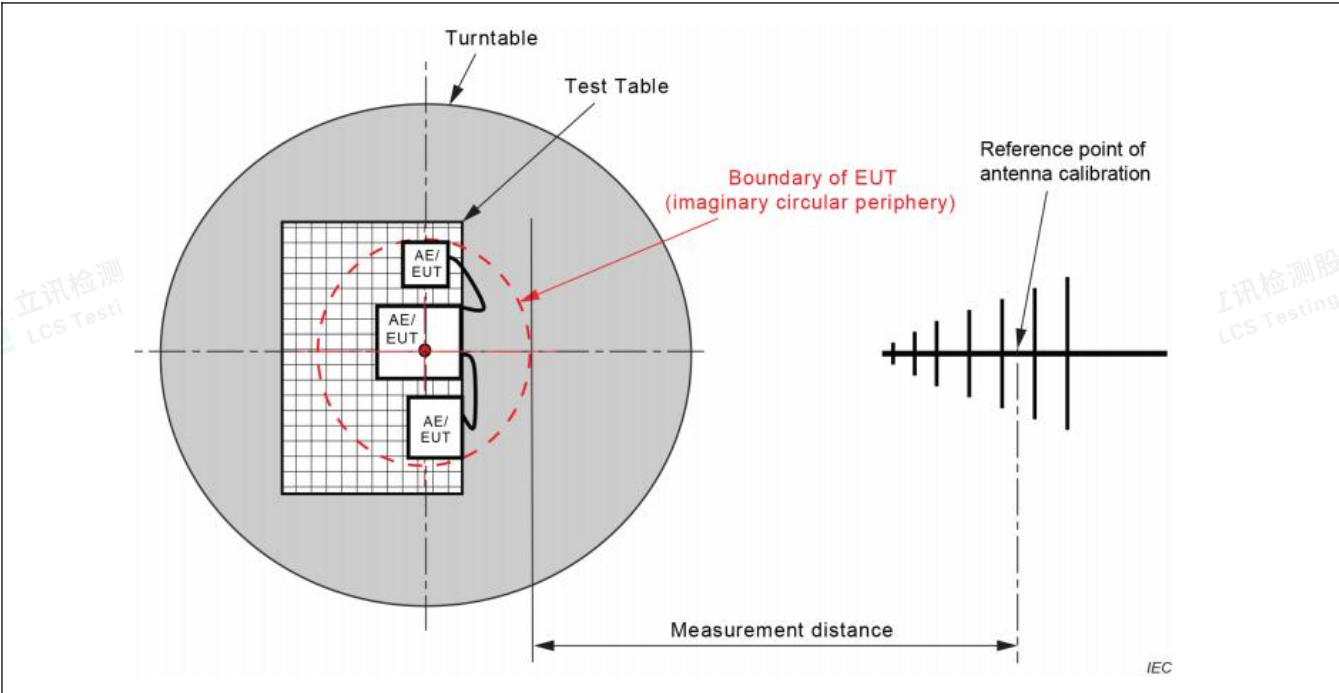
Standard	J 55015 (H29)
Basic Standard(s)	CISPR 16-2-3
Test method	Semi Anechoic Chamber (SAC)

Radiated disturbance limit

Frequency range [MHz]	Limit: Quasi-peak [dB(μV/m)]		IF BW
	3 m distance	10 m distance	
30 - 230	40	30	120 KHz
230 - 300	47	37	120 KHz

1) At the transition frequency, the lower limit applies.
2) Distance refers to the distance in meters between the measuring instrument antenna geometric center and the closed point of any part of the EUT.

Test configuration



Test Procedure Description

The radiated disturbance test was conducted in a 3m Semi Anechoic Chamber and conforming to CISPR 16-2-3. the EUT is placed on a turntable, which is 0.8 meter high above the ground. the turntable can rotate 360 degrees to determine the position of the maximum emission level. the EUT is set 3 meters away from the receiving antenna, which is mounted on an antenna tower. the antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Log-periodic Antenna (calibrated by Dipole antenna) is used as a receiving antenna. both horizontal and vertical polarization of the antenna is set on test.

Test Results refer to Annex A.2

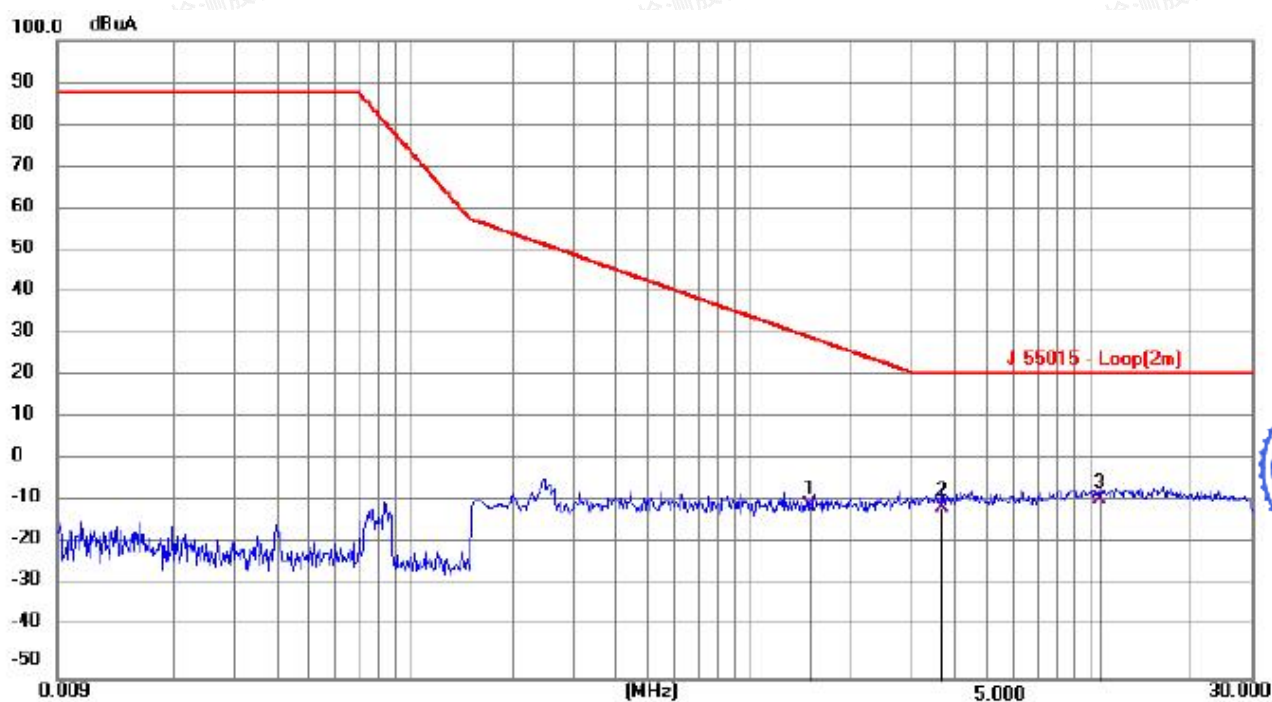




ANNEX A - TEST RESULTS

A.1. RADIATED DISTURBANCE TEST RESULTS (9kHz - 30MHz)

Environmental Conditions	24.4℃, 53% RH
Model	AOK-30WsC--DC-A5-00-6570-BN-A
Operating mode	Mode 1 (worst case)
Test voltage	DC
Test engineer	ZOM ZHANG
Pol	X



No.	Mk.	Freq. MHz	Reading Level dBuA	Correct Factor dB	Measure- ment dBuA	Limit dBuA	Over dB	Detector	Comment
1		1.4955	-33.90	24.75	-9.15	30.37	-39.52	QP	
2		3.6780	-34.62	25.12	-9.50	22.00	-31.50	QP	
3	*	10.6755	-34.11	26.13	-7.98	22.00	-29.98	QP	



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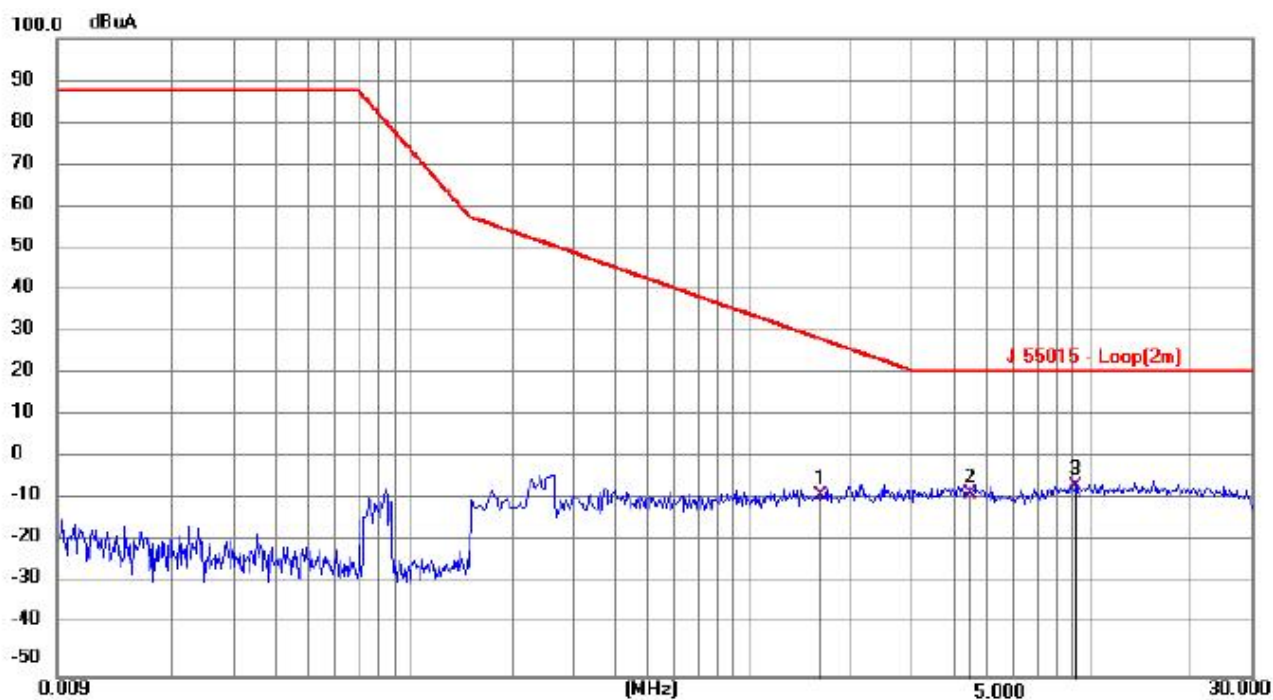
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Environmental Conditions	24.4℃, 53% RH
Model	AOK-30WsC--DC-A5-00-6570-BN-A
Operating mode	Mode 1 (worst case)
Test voltage	DC
Test engineer	ZOM ZHANG
Pol	Y

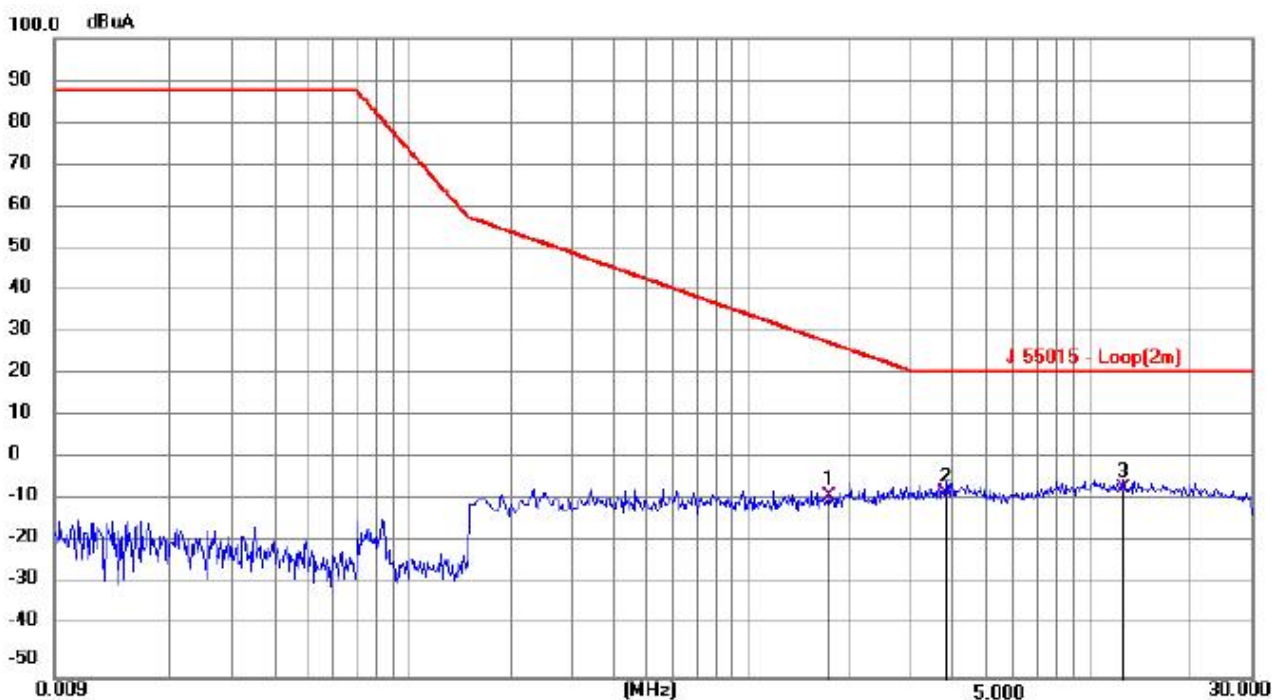


No.	Mk.	Freq. MHz	Reading Level dBuA	Correct Factor dB	Measure- ment dBuA	Limit dBuA	Over dB	Detector	Comment
1		1.6125	-32.80	25.44	-7.36	29.46	-36.82	QP	
2		4.4610	-32.97	25.87	-7.10	22.00	-29.10	QP	
3	*	9.1725	-31.64	26.28	-5.36	22.00	-27.36	QP	





Environmental Conditions	24.4℃, 53% RH
Model	AOK-30WsC--DC-A5-00-6570-BN-A
Operating mode	Mode 1 (worst case)
Test voltage	DC
Test engineer	ZOM ZHANG
Pol	Z



No.	Mk.	Freq. MHz	Reading Level dBuA	Correct Factor dB	Measure- ment dBuA	Limit dBuA	Over dB	Detector	Comment
1		1.7205	-32.45	25.10	-7.35	28.68	-36.03	QP	
2		3.7995	-33.23	26.38	-6.85	22.00	-28.85	QP	
3	*	12.6735	-32.08	26.68	-5.40	22.00	-27.40	QP	





A.2. RADIATED DISTURBANCE TEST RESULTS (30MHz - 300MHz)

Environmental Conditions	24.9℃, 50% RH
Model	AOK-30WsC--DC-A5-00-6570-BN-A
Operating mode	Mode 1 (worst case)
Test voltage	DC
Test engineer	ZOM ZHANG
Pol	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		56.7376	13.03	14.67	27.70	40.00	-12.30	QP		
2	*	111.5247	20.84	12.56	33.40	40.00	-6.60	QP		
3		162.4599	17.29	10.15	27.44	40.00	-12.56	QP		





Environmental Conditions	24.9℃, 50% RH
Model	AOK-30WsC--DC-A5-00-6570-BN-A
Operating mode	Mode 1 (worst case)
Test voltage	DC
Test engineer	ZOM ZHANG
Pol	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		57.4773	5.82	13.38	19.20	40.00	-20.80	QP		
2		113.4674	12.48	11.52	24.00	40.00	-16.00	QP		
3	*	176.0440	15.55	10.45	26.00	40.00	-14.00	QP		



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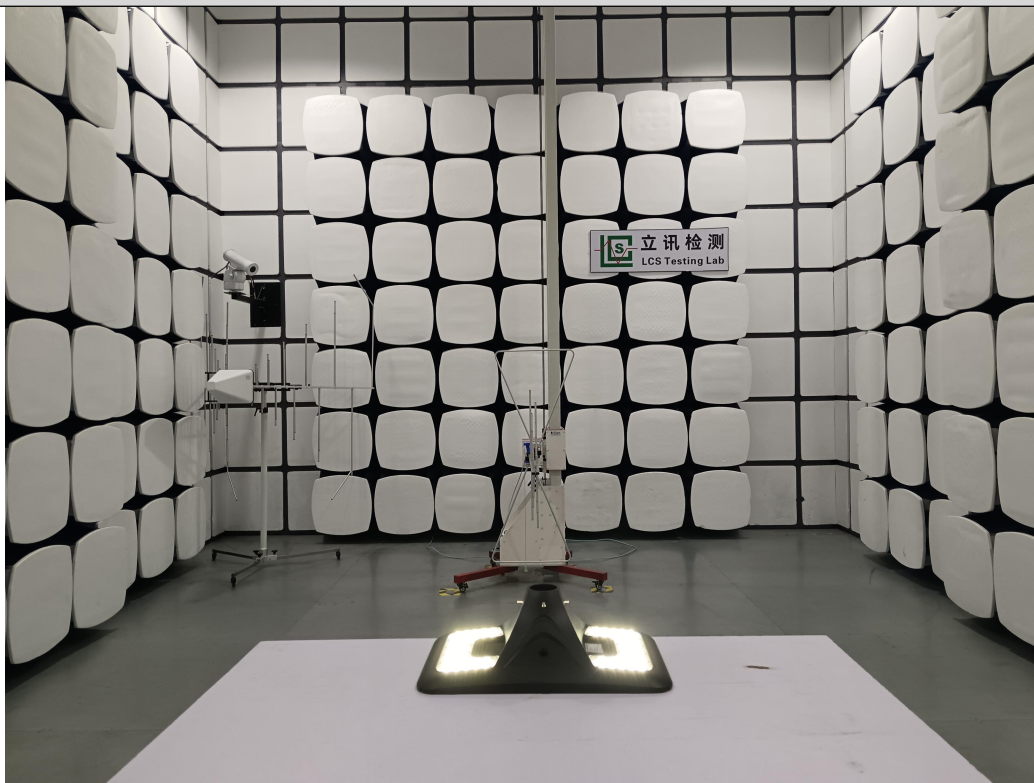


ANNEX B - TEST PHOTOS

B.1. Radiated Disturbance (9kHz - 30MHz)



B.2. Radiated Disturbance (30MHz to 300MHz)



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ANNEX C - EXTERNAL AND INTERNAL PHOTOS OF THE EUT



Photo.1



Photo.2



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Photo.3

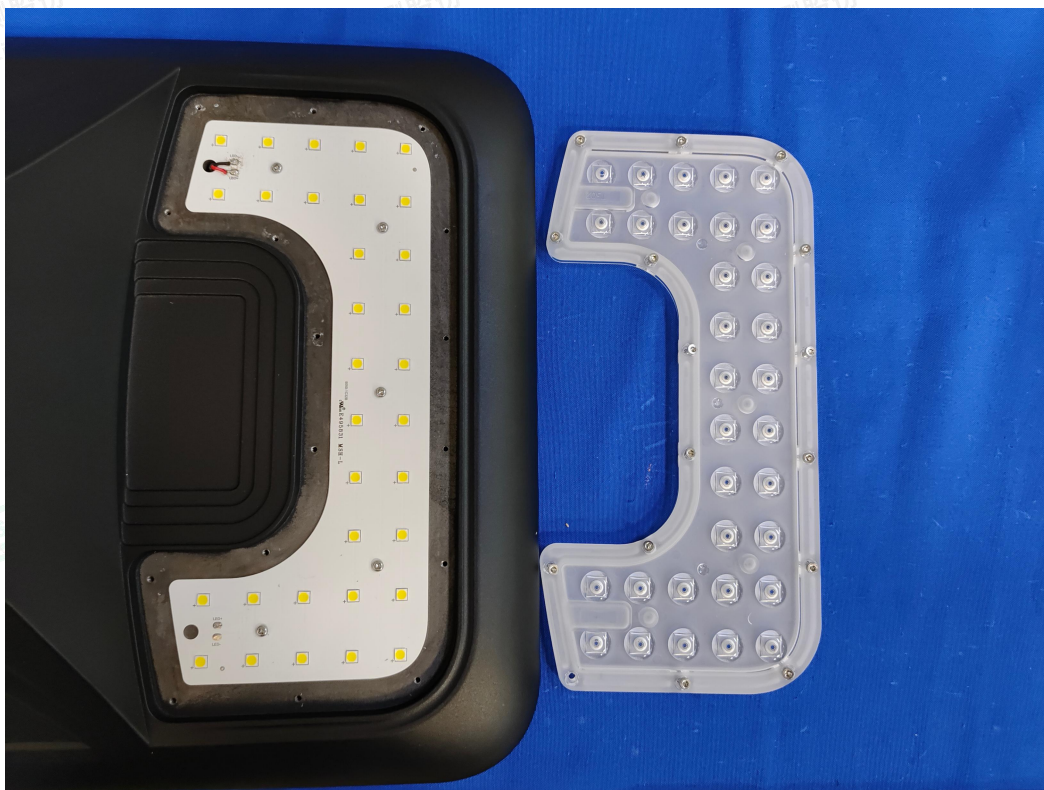


Photo.4



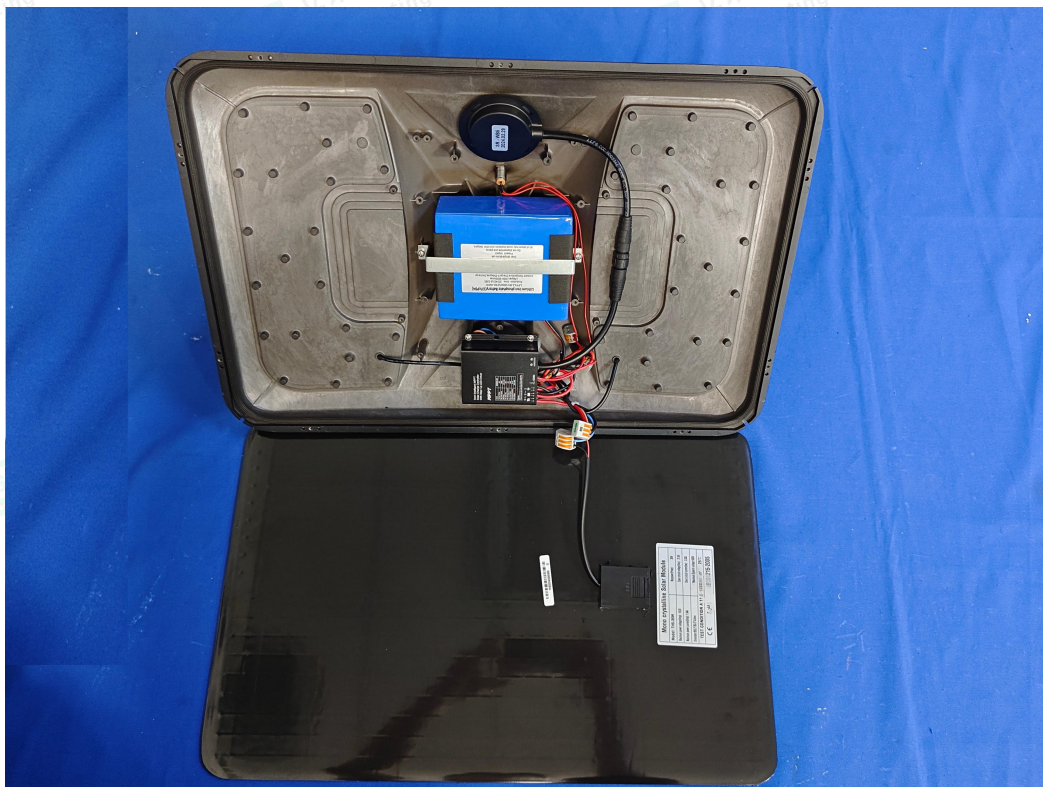


Photo.5



Photo.6





Photo.7

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