

## EMC TEST REPORT

For

Ningbo Amlife Photoelectricity Co., Ltd

S3 constant bright solar integrated lamp

Test Model: AL-S3 CL

Prepared for : Ningbo Amlife Photoelectricity Co., Ltd  
Address : No. 24 Fangshan Road Qiaotouhu Industrial Zone,  
Ninghai County, Zhejiang, China

Prepared by : Ningbo LCS Standard Technology Service Co., Ltd.  
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Date of receipt of test : April. 06, 2021  
sample  
Number of tested samples : 1  
Serial number : Prototype  
Date of Test : April. 06, 2021~ April. 09, 2021  
Date of Report : April. 09, 2021

**EMC TEST REPORT****EN IEC 55015:2019**

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

**EN 61547: 2009**

Equipment for general lighting purposes - EMC immunity requirements

**Report Reference No. .... : LCS210406002EE**

Date Of Issue..... : April. 09, 2021

**Testing Laboratory Name.... : Ningbo LCS Standard Technology Service Co., Ltd.**

Address..... : Room 101-106, 202-206, Building 037, No. 166, Jinghua Road, Meixu Street, Ningbo High-tech Zone, Yinzhou District, Ningbo City, Zhejiang Province, China

Testing Location/ Procedure.. : Full application of Harmonised standards ■  
Partial application of Harmonised standards □  
Other standard testing method □**Applicant's Name..... : Ningbo Amlife Photoelectricity Co., Ltd**

Address..... : No. 24 Fangshan Road Qiaotouhu Industrial Zone, Ninghai County, Zhejiang, China

**Test Specification:**Standard..... : EN IEC 55015:2019  
EN 61547: 2009

Test Report Form No..... : LCSEMC-1.0

TRF Originator..... : Ningbo LCS Standard Technology Service Co., Ltd.

Master TRF..... : Dated 2019-03

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**Test Item Description..... : S3 constant bright solar integrated lamp**

Trade Mark..... : N/A

Test Model..... : AL-S3 CL

Ratings..... : DC 5V, 200mA, 1W

**Result ..... : PASS****Compiled by:***Feng liang*

Feng liang/File administrators

**Supervised by:***Joker Wang*

Joker Wang/Technique principal

**Approved by:**

LH Li/Manager

## EMC -- TEST REPORT

**Test Report No. : LCS210406002EE**April. 09, 2021

Date of issue

Test Model..... : AL-S3 CL

EUT..... : S3 constant bright solar integrated lamp

**Applicant..... : Ningbo Amlife Photoelectricity Co., Ltd**Address..... : No. 24 Fangshan Road Qiaotouhu Industrial Zone,  
Ninghai County, Zhejiang, China

Telephone..... : /

Fax..... : /

**Manufacturer..... : Ningbo Amlife Machinery Co., Ltd**Address..... : No. 24 Fangshan Road Qiaotouhu Industrial Zone,  
Ninghai County, Zhejiang, China  
Zone, Ninghaicounty, Zhejiang, China

Telephone..... : /

Fax..... : /

**Factory..... : Ningbo Amlife Machinery Co., Ltd**Address..... : No. 24 Fangshan Road Qiaotouhu Industrial Zone,  
Ninghai County, Zhejiang, China  
Zone, Ninghaicounty, Zhejiang, China

Telephone..... : /

Fax..... : /

**Test Result: PASS**

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.

## Revision History

Revision	Issue Date	Revisions	Revised By
000	April. 09, 2021	Initial Issue	Lh Li

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# 1. SUMMARY OF STANDARDS AND RESULTS

## 1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION (EN IEC 55015:2019)			
Description of Test Item	Standard	Limits	Results
Conducted disturbance at mains terminals	EN IEC 55015:2019	-----	N/A
Magnetic field emission	EN IEC 55015:2019	-----	PASS
Radiated disturbance	EN IEC 55015:2019	-----	PASS
Harmonic current emissions	EN IEC 61000-3-2:2019	Class C	N/A
Voltage fluctuations & flicker	EN 61000-3-3: 2013+A1:2019	-----	N/A
IMMUNITY (EN 61547: 2009)			
Description of Test Item	Basic Standard	Performance Criteria	Results
Electrostatic discharge (ESD)	EN 61000-4-2: 2009	B	PASS
Radio-frequency, Continuous radiated disturbance	EN 61000-4-3: 2006+A2: 2010	A	PASS
Electrical fast transient (EFT)	EN 61000-4-4: 2012	B	N/A
Surge (Input a.c. power ports)	EN 61000-4-5: 2014+A1: 2017	C	N/A
Radio-frequency, Continuous conducted disturbance	EN 61000-4-6: 2014	A	N/A
Power frequency magnetic field	EN 61000-4-8: 2010	A	N/A
Voltage dips, 30% reduction	EN 61000-4-11: 2004+A1: 2017	C	N/A
Voltage interruptions		B	N/A
N/A is an abbreviation for Not Applicable.			

## 1.2.Description of Performance Criteria

### **General Performance Criteria**

Examples of functions defined by the manufacturer to be evaluated during testing include, but are not limited to, the following:

- essential operational modes and states;
- tests of all peripheral access (hard disks, floppy disks, printers, keyboard, mouse, etc.);
- quality of software execution;
- quality of data display and transmission;
- quality of speech transmission.

#### 1.2.1.Performance criterion A

The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacture when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be deliver from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

#### 1.2.2.Performance criterion B

After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacture, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.

During the test, degradation of performance is allowed. However, no change of operation state or stored data is allowed to persist after the test.

If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be deliver from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

#### 1.2.3.Performance criterion C

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacture's instructions.Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be loss.

## 2. GENERAL INFORMATION

### 2.1. Description of Device (EUT)

EUT : S3 constant bright solar integrated lamp

Trade Mark : N/A

Test Model : AL-S3 CL

Additional Models : N/A

Power Supply : DC 5V, 200mA, 1W

### 2.2. Support equipment List

Name	manufacturers	M/N	S/N	Certificate
-	-	-	-	-

### 2.3. Description of Test Facility

Site Description CNAS No.: L13445

EMC Lab. : CAN No. : 191121112621

Test Facilities : Ningbo LCS Standard Technology Service Co., Ltd.  
Room 101-106, 202-206, Building 037, No. 166, Jinghua Road,  
Meixu Street, Ningbo High-tech Zone, Yinzhou District, Ningbo City,  
Zhejiang Province, China

RF Field Strength Susceptibility : Shenzhen LCS Compliance Testing Laboratory Ltd.  
101, 201 Building A and 301 Building C, Juji Industrial Park,  
Yabianxueziwei, Shajing Street, Baoan District, Shenzhen,  
Guangdong, China

## 2.4.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.

## 2.5.Measurement Uncertainty

Test Item	Frequency Range	Expanded uncertainty (U <sub>lab</sub> )	Expanded uncertainty (U <sub>cispr</sub> )
Conducted Emission	Level accuracy (9kHz to 150kHz) (150kHz to 30MHz)	$\pm 2.63$ dB $\pm 2.35$ dB	$\pm 3.8$ dB $\pm 3.4$ dB
Power disturbance	Level accuracy (30MHz to 300MHz)	$\pm 2.90$ dB	$\pm 4.5$ dB
Electromagnetic Radiated Emission (3-loop)	Level accuracy (9kHz to 30MHz)	$\pm 3.60$ dB	$\pm 3.3$ dB
Radiated Emission	Level accuracy (9kHz to 30MHz)	$\pm 3.68$ dB	N/A
Radiated Emission	Level accuracy (30MHz to 1000MHz)	$\pm 3.48$ dB	$\pm 5.3$ dB
Radiated Emission	Level accuracy (above 1000MHz)	$\pm 3.90$ dB	$\pm 5.2$ dB
Mains Harmonic	Voltage	$\pm 0.510\%$	N/A
Voltage Fluctuations & Flicker	Voltage	$\pm 0.510\%$	N/A

- (1) Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.
- (2) 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

#### 3.1. Radiated Electromagnetic Disturbance

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Large Loop Antenna	DAZE	ZN304401	17029	2020-06-01
2	EMI Test Receiver	R&S	ESR 3	102519	2020-06-01
3	EMI Test Software	AUDIX	E3	/	N/A

#### 3.2. Radiated Disturbance (Electric Field)

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Software	AUDIX	E3	/	N/A
2	3m Semi Anechoic Chamber	MAORUI	9m*6m*6	160218849	2020-06-01
3	By-log Antenna	SCHWARZBECK	VULB9168	9168-988	2020-06-01
4	Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-2049	2020-06-01
5	EMI Test Receiver	R&S	ESRP	101372	2020-06-01
6	AMPLIFIER	SCHWARZBECK	BBV9745	136	2020-06-01
7	RF Cable	Hubber Suhner	CBL-RE	/	2020-06-01
8	AMPLIFIER	SCHWARZBECK	BBV9718C	21	2020-06-01

#### 3.3. Electrostatic Discharge

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ESD Simulator	SCHLODER	SESD216	102318	2020-05-28

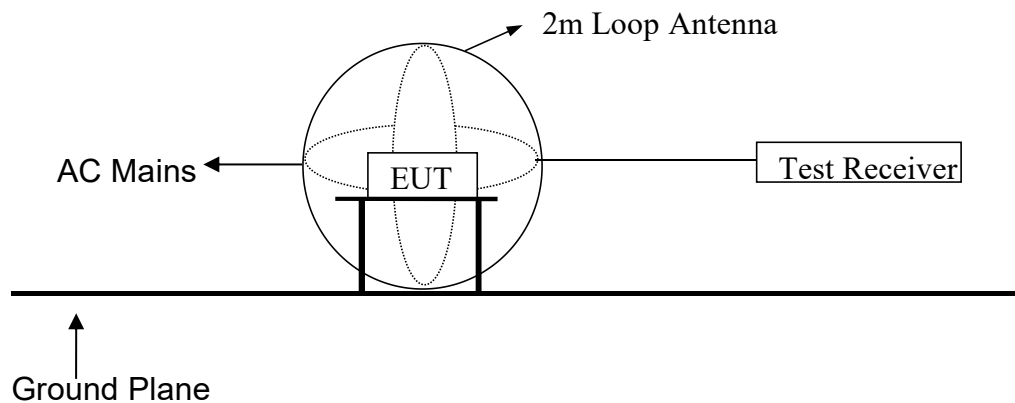
#### 3.4. RF Field Strength Susceptibility

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	RS Test Software	Tonscend	/	/	N/A
2	ESG Vector Signal Generator	Agilent	E4438C	MY42081396	2020-11-14
3	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2020-06-11
4	RF POWER AMPLIFIER	OPHIR	5225R	1052	2020-11-21
5	RF POWER AMPLIFIER	OPHIR	5273F	1019	2020-11-21
6	Stacked Broadband Log Periodic Antenna	SCHWARZBECK	STLP 9128	9128ES-145	2020-11-21
7	Stacked Mikrowellen Log.-Per Antenna	SCHWARZBECK	STLP 9149	9149-484	2020-11-21
8	RS Test Software	Tonscend	/	/	2021-03-24

Note: NCR means no calibration requirement

## 4. MAGNETIC FIELD EMISSION MEASUREMENT

### 4.1. Block Diagram of Test Setup



### 4.2. Magnetic Field Emission Measurement Standard and Limits

#### 4.2.1. Test Standard

EN IEC 55015:2019

#### 4.2.2. Test Limits

Frequency	Limits for loop diameter (dB $\mu$ A)
	2m
9kHz ~ 70kHz	88
70kHz ~ 150kHz	88 ~ 58*
150kHz ~ 3.0MHz	58 ~ 22*
3.0MHz ~ 30MHz	22

1. At the transition frequency the lower limit applies.
2. \* decreasing linearly with logarithm of the frequency.

### 4.3. EUT Configuration on Test

The configuration of the EUT is same as Section 3

### 4.4. Operating Condition of EUT

- 4.4.1. Setup the EUT as shown in Section 4.1.
- 4.4.2. Turn on the power of all equipments.
- 4.4.3. Let the EUT work in test mode (Lighting) and measure it.

#### 4.5. Test Procedure

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.

The frequency range from 9kHz to 30MHz is investigated. The receiver is measured with the quasi-peak detector. For frequency band 9kHz to 150kHz, the bandwidth of the field strength meter is set at 200Hz. For frequency band 150kHz to 30MHz, the bandwidth is set at 9kHz.

All the test results are listed in Section 4.6.

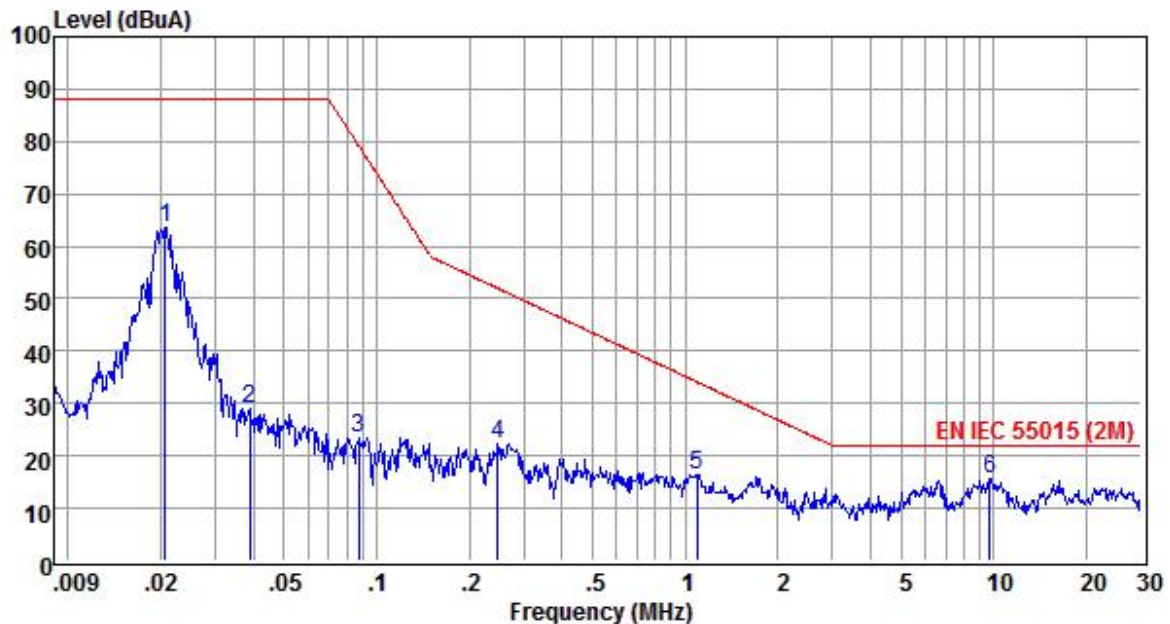
#### 4.6. Test Results

**PASS.**

The frequency range from 9kHz to 30MHz is investigated.

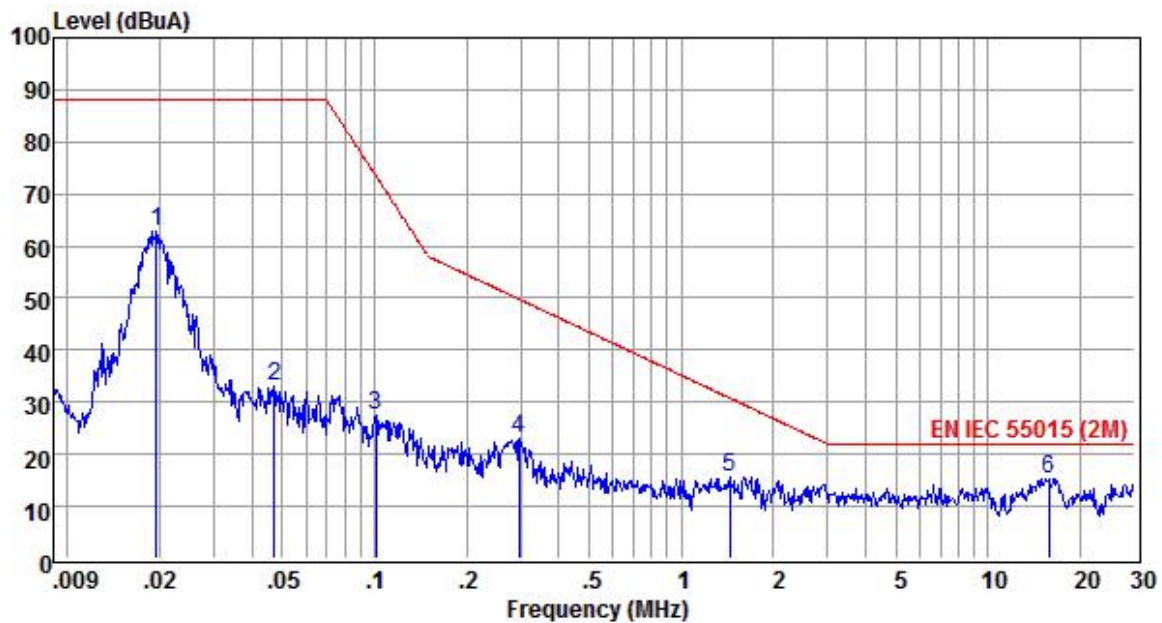
Environmental Conditions:	22.6℃, 54% RH
Test Voltage:	DC 3.7V
Test Model:	AL-S3 CL
Test Mode:	Lighting
Test Engineer:	Feng liang
Pol:	X

Detailed results are shown below



	Freq	Reading	LisnFac	CabLos	Measured	Limit	Over	Remark
	MHz	dBpW	dB	dB	dBpW	dBpW	dB	
1	0.02	63.39	0.00	0.00	63.39	88.00	-24.61	QP
2	0.04	29.03	0.00	0.00	29.03	88.00	-58.97	QP
3	0.09	23.50	0.00	0.00	23.50	79.34	-55.84	QP
4	0.25	22.31	0.00	0.00	22.31	52.04	-29.73	QP
5	1.10	16.36	0.00	0.00	16.36	34.10	-17.74	QP
6	9.71	15.47	0.00	0.00	15.47	22.00	-6.53	QP

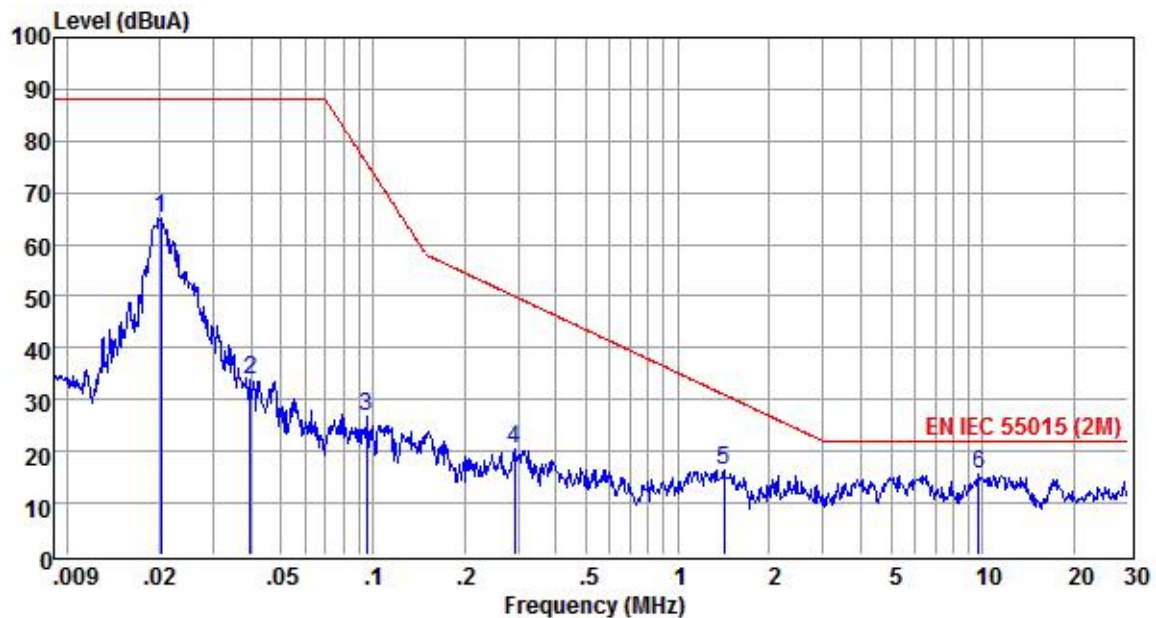
Environmental Conditions:	22.6°C, 54% RH
Test Voltage:	DC 3.7V
Test Model:	AL-S3 CL
Test Mode:	Lighting
Test Engineer:	Feng liang
Pol:	Y
Detailed results are shown below	



	Freq	Reading	LisnFac	CabLos	Measured	Limit	Over	Remark
	MHz	dBpW	dB	dB	dBpW	dBpW	dB	
1	0.02	62.98	0.00	0.00	62.98	88.00	-25.02	QP
2	0.05	33.17	0.00	0.00	33.17	88.00	-54.83	QP
3	0.10	27.36	0.00	0.00	27.36	73.59	-46.23	QP
4	0.30	23.01	0.00	0.00	23.01	49.80	-26.79	QP
5	1.44	15.64	0.00	0.00	15.64	30.79	-15.15	QP
6	15.81	15.32	0.00	0.00	15.32	22.00	-6.68	QP

Environmental Conditions:	22.6°C, 54% RH
Test Voltage:	DC 3.7V
Test Model:	AL-S3 CL
Test Mode:	Lighting
Test Engineer:	Feng liang
Pol:	Z

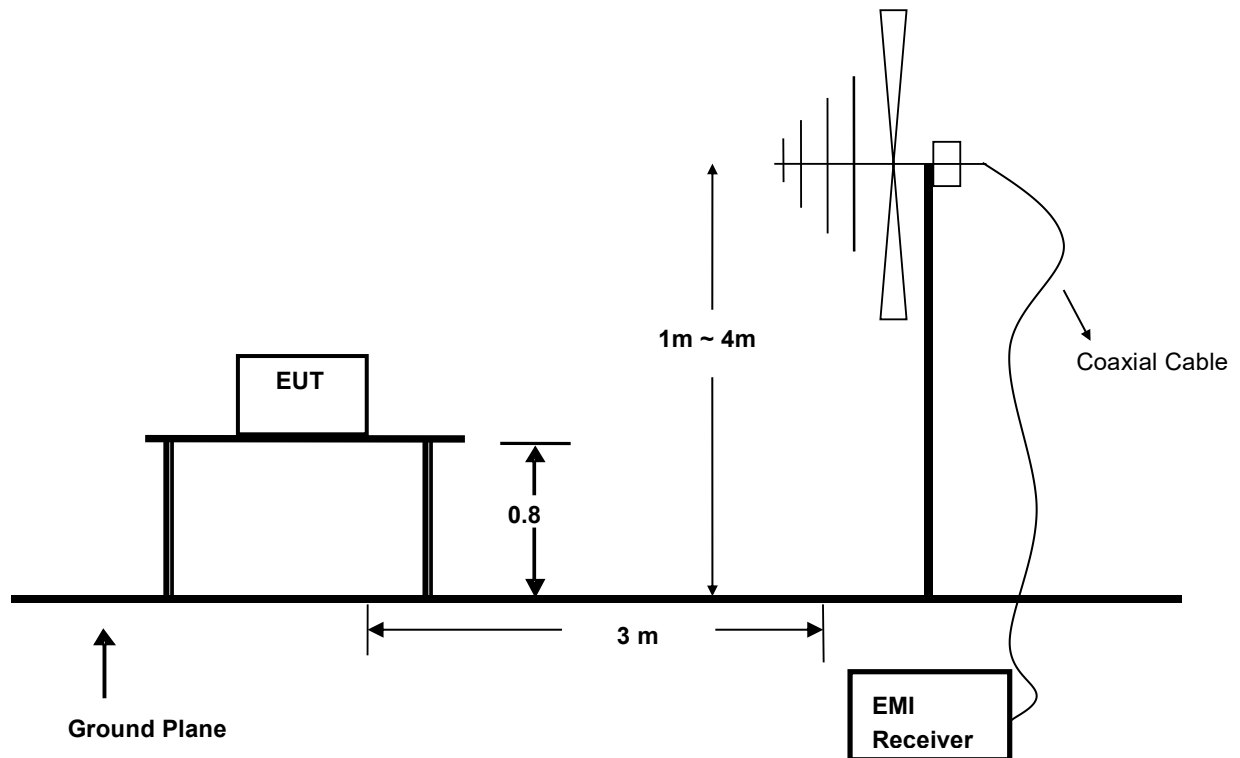
Detailed results are shown below



	Freq	Reading	LisnFac	CabLos	Measured	Limit	Over	Remark
	MHz	dBpW	dB	dB	dBpW	dBpW	dB	
1	0.02	65.05	0.00	0.00	65.05	88.00	-22.95	QP
2	0.04	33.68	0.00	0.00	33.68	88.00	-54.32	QP
3	0.10	26.79	0.00	0.00	26.79	75.83	-49.04	QP
4	0.29	20.45	0.00	0.00	20.45	49.99	-29.54	QP
5	1.42	16.30	0.00	0.00	16.30	30.98	-14.68	QP
6	9.71	15.51	0.00	0.00	15.51	22.00	-6.49	QP

## 5. RADIATED EMISSION MEASUREMENT

### 5.1. Block Diagram of Test Setup



### 5.2. Test Standard

EN IEC 55015:2019

### 5.3. Radiated Emission Limits

All emanations from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT (dB $\mu$ V/m)
30 ~ 230	3	40
230 ~ 1000	3	47

Note: (1) The smaller limit shall apply at the combination point between two frequency bands.

(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT.

## 5.4.EUT Configuration on Test

The EN 55015 regulations test method must be used to find the maximum emission during radiated emission measurement.

## 5.5.Operating Condition of EUT

5.5.1 Turn on the power.

5.5.2 After that, let the EUT work in test mode (Lighting) and measure it.

## 5.6.Test Procedure

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. By-log antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The bandwidth of the Receiver is set at 120kHz/300kHz.

The frequency range from 30MHz to 300MHz is investigated.

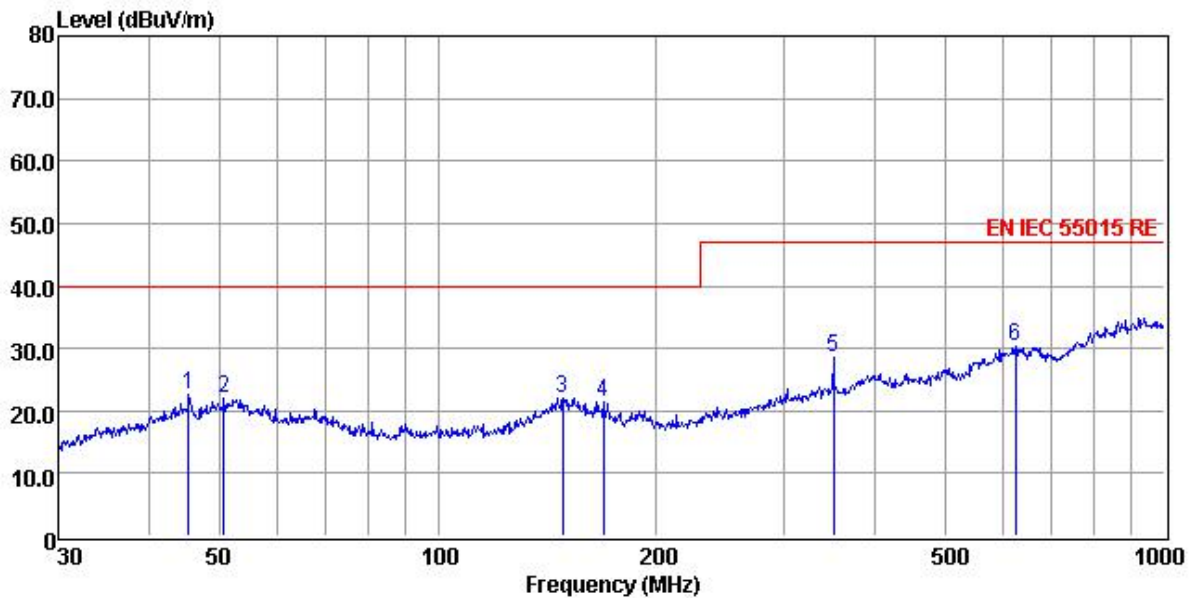
## 5.7.Test Results

**PASS.**

The test result please refer to the next page.

Environmental Conditions:	21.8℃, 54% RH
Test Voltage:	DC 3.7V
Test Model:	AL-S3 CL
Test Mode:	Lighting
Test Engineer:	Feng liang
Pol:	Vertical

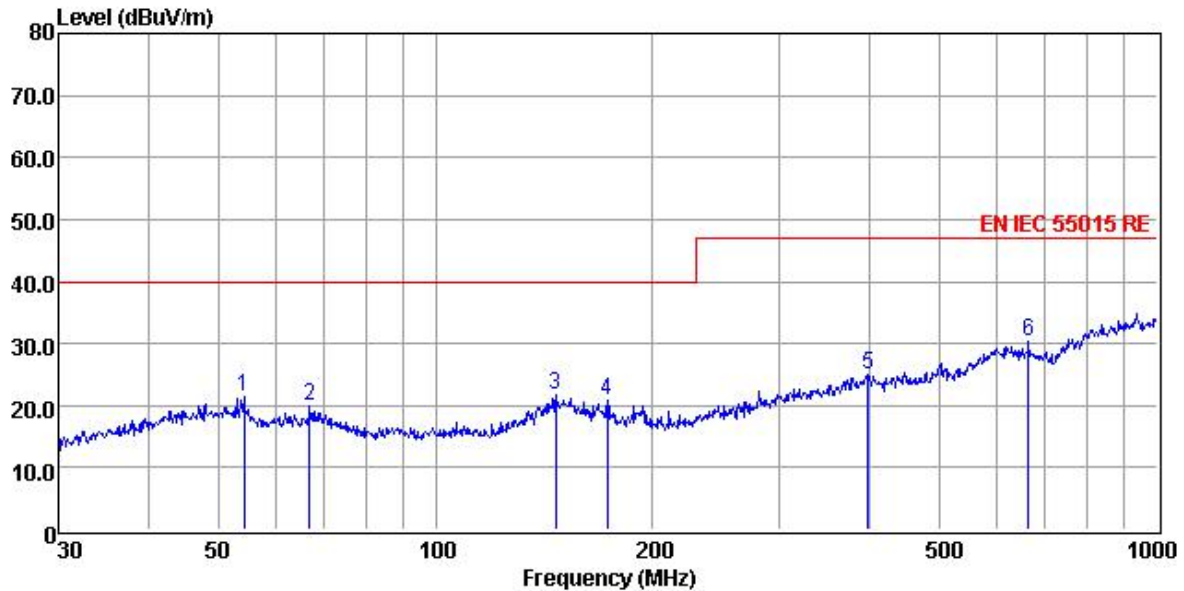
Detailed results are shown below



	Freq	Read Level	Cable Loss	Antenna Factor	Preamplifier Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB/m	dB	dBuV/m	dBuV/m	dB	
1	45.38	37.58	2.35	12.93	30.32	22.54	40.00	-17.46	QP
2	50.76	36.56	2.42	13.46	30.32	22.12	40.00	-17.88	QP
3	148.44	35.12	3.53	14.08	30.59	22.14	40.00	-17.86	QP
4	169.01	36.31	3.74	12.06	30.63	21.48	40.00	-18.52	QP
5	350.48	40.28	5.20	14.00	31.02	28.46	47.00	-18.54	QP
6	622.89	35.54	5.94	20.39	31.67	30.20	47.00	-16.80	QP

Environmental Conditions:	21.8℃, 54% RH
Test Voltage:	DC 3.7V
Test Model:	AL-S3 CL
Test Mode:	Lighting
Test Engineer:	Feng liang
Pol:	Horizontal

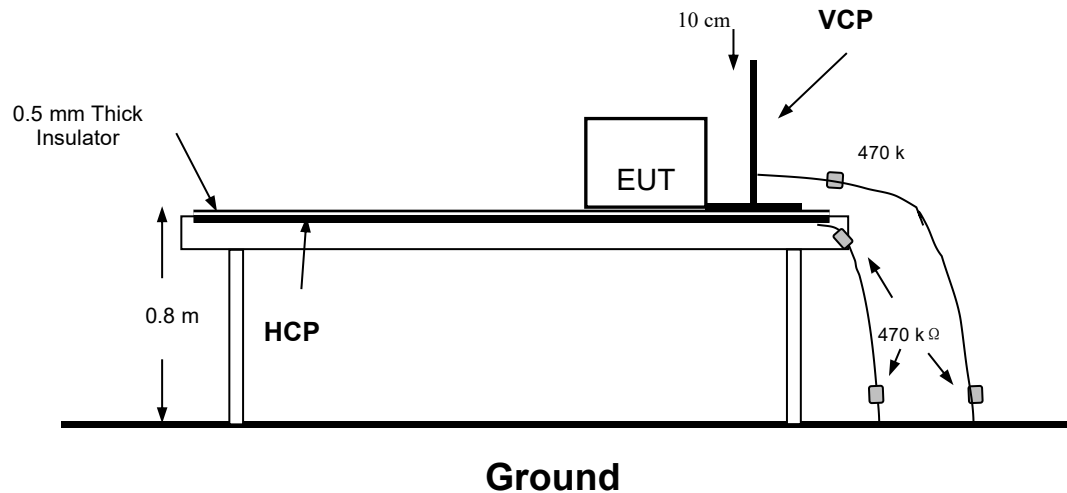
Detailed results are shown below



	Freq	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB/m	dB	dBuV/m	dBuV/m	dB	
1	54.26	36.20	2.48	13.15	30.34	21.49	40.00	-18.51	QP
2	66.97	35.48	2.67	12.04	30.38	19.81	40.00	-20.19	QP
3	146.89	34.90	3.51	13.86	30.59	21.68	40.00	-18.32	QP
4	173.21	36.16	3.78	11.55	30.64	20.85	40.00	-19.15	QP
5	397.63	34.63	5.31	16.17	31.17	24.94	47.00	-22.06	QP
6	663.47	35.65	6.14	20.26	31.74	30.31	47.00	-16.69	QP

## 6. ELECTROSTATIC DISCHARGE TEST

### 6.1. Block Diagram of Test Setup



### 6.2. Test Standard

EN 61547: 2009 (EN 61000-4-2: 2009, Severity Level: Air Discharge: Level 3,  $\pm 8\text{KV}$   
Contact Discharge: Level 2,  $\pm 4\text{KV}$ )

### 6.3. Severity Levels and Performance Criterion

#### 6.3.1. Severity level

Level	Test Voltage Contact Discharge (KV)	Test Voltage Air Discharge (KV)
1.	$\pm 2$	$\pm 2$
2.	$\pm 4$	$\pm 4$
3.	$\pm 6$	$\pm 8$
4.	$\pm 8$	$\pm 15$
X	Special	Special

#### 6.3.2. Performance criterion: **B**

### 6.4. EUT Configuration on Test

The configuration of EUT is listed in Section 3

## 6.5. Operating Condition of EUT

- 6.5.1. Setup the EUT as shown in Section 6.1.
- 6.5.2. Turn on the power of all equipments.
- 6.5.3. Let the EUT work in test mode (Lighting) and measure it.

## 6.6. Test Procedure

### 6.6.1. Air Discharge

This test is done on a non-conductive surfaces. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

Because the case of the EUT is metal surface, so it does not need to be tested.

### 6.6.2. Contact Discharge

All the procedure shall be same as Section 6.6.1. except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

### 6.6.3. Indirect Discharge For Horizontal Coupling Plane

At least 20 single discharges shall be applied to the horizontal coupling plane, at points on each side of the EUT. The discharge electrode positions vertically at a distance of 0.1m from the EUT and with the discharge electrode touching the coupling plane.

### 6.6.4. Indirect Discharge For Vertical Coupling Plane

At least 20 single discharge shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

## 6.7. Test Results

**PASS.**

Please refer to the following page.

# Electrostatic Discharge Test Results

<b>Standard</b>	<input type="checkbox"/> IEC 61000-4-2 <input checked="" type="checkbox"/> EN 61000-4-2		
<b>Applicant</b>	Ningbo Amlife Photoelectricity Co., Ltd		
<b>EUT</b>	S3 constant bright solar integrated lamp	<b>Temperature</b>	21.4℃
<b>M/N</b>	AL-S3 CL	<b>Humidity</b>	55.5%
<b>Criterion</b>	B	<b>Pressure</b>	1021mbar
<b>Test Mode</b>	Lighting	<b>Test Engineer</b>	Feng liang

## Air Discharge

Test Points	Test Levels			Results		
	± 2KV	± 4KV	± 8KV	Pass	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Top	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Bottom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

## Contact Discharge

Test Points	Test Levels		Results		
	± 2 KV	±4 KV	Pass	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Top	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Bottom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

## Discharge To Horizontal Coupling Plane

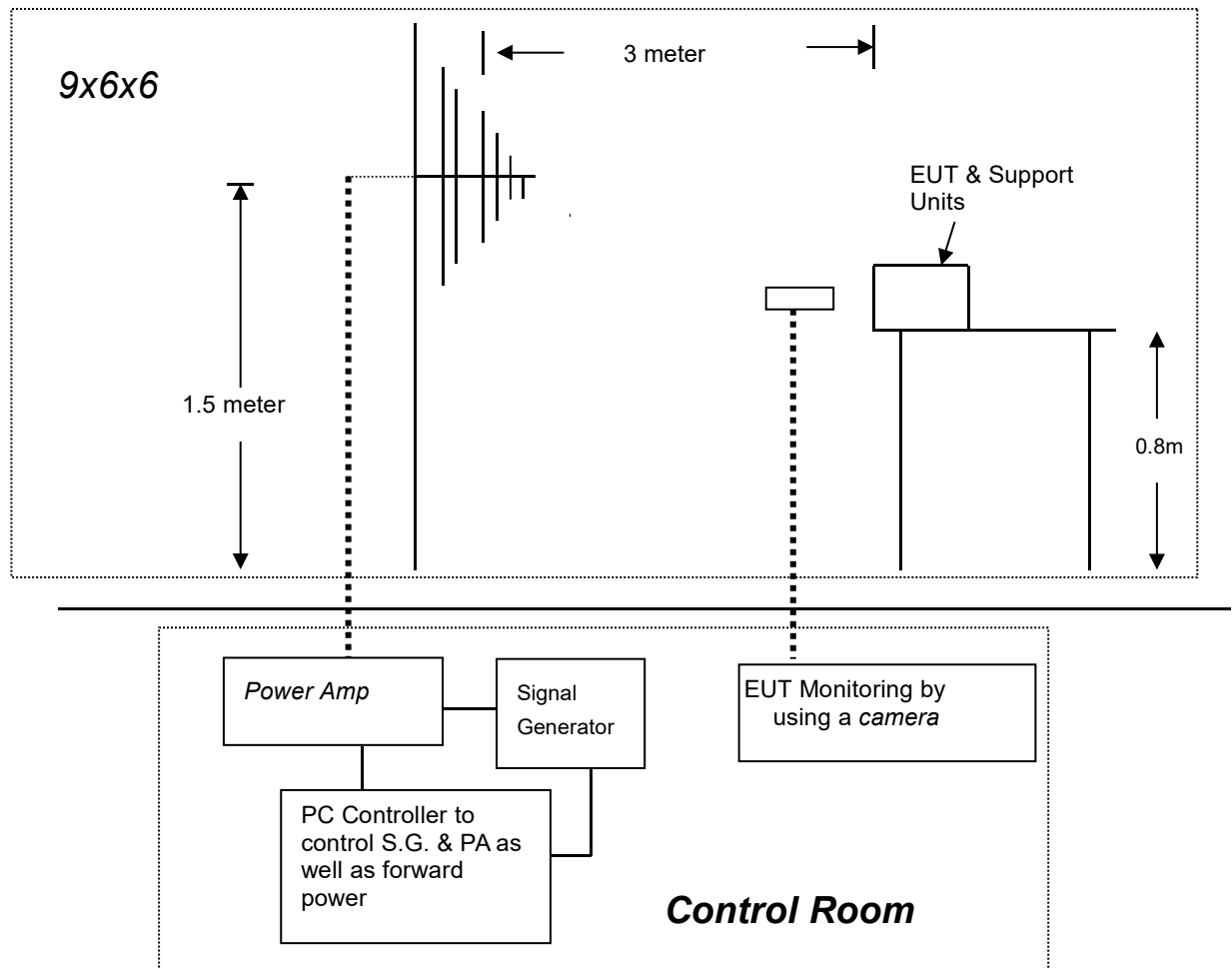
Side of EUT	Test Levels		Results		
	± 2 KV	± 4 KV	Pass	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

## Discharge To Vertical Coupling Plane

Side of EUT	Test Levels		Results		
	± 2 KV	± 4 KV	Pass	Fail	Performance Criterion
Front	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Back	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Left	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B
Right	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> A <input checked="" type="checkbox"/> B

## 7. RF FIELD STRENGTH SUSCEPTIBILITY TEST

### 7.1. Block Diagram of Test Setup



### 7.2. Test Standard

EN 61547: 2009 (EN 61000-4-3: 2006+A2: 2010, Severity Level: 2, 3V / m)

### 7.3. Severity Levels and Performance Criterion

#### 7.3.1. Severity level

Level	Field Strength (V/m)
1	1
2	3
3	10
X	Special

#### 7.3.2. Performance criterion: **A**

## 7.4.EUT Configuration on Test

The configuration of EUT are listed in Section 3

## 7.5.Operating Condition of EUT

7.5.1.Setup the EUT as shown in Section 7.1.

7.5.2.Turn on the power of all equipments.

7.5.3.Let the EUT work in test mode (Lighting) and measure it.

## 7.6.Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. EUT is set 3 meter away from the transmitting antenna which is mounted on an antenna tower. Both horizontal and vertical polarization of the antenna are set on test. Each of the four sides of EUT must be faced this transmitting antenna and measured individually. In order to judge the EUT performance, a CCD camera is used to monitor EUT screen. All the scanning conditions are as follows:

Condition of Test	Remarks
-----	-----
3. Fielded Strength	3 V/m (Severity Level 2)
4. Radiated Signal	Unmodulated
5. Scanning Frequency	80 - 1000 MHz
6. Dwell time of radiated	0.0015 decade/s
7. Waiting Time	3 Sec.

## 7.7.Test Results

**PASS.**

Please refer to the following page.

# RF Field Strength Susceptibility Test Results

<b>Standard</b>	<input type="checkbox"/> IEC 61000-4-3 <input checked="" type="checkbox"/> EN 61000-4-3		
<b>Applicant</b>	Ningbo Amlife Photoelectricity Co., Ltd		
<b>EUT</b>	S3 constant bright solar integrated lamp	<b>Temperature</b>	21.8℃
<b>M/N</b>	AL-S3 CL	<b>Humidity</b>	55.4%
<b>Field Strength</b>	3 V/m	<b>Criterion</b>	A
<b>Test Mode</b>	Lighting	<b>Test Engineer</b>	Jason Deng
<b>Frequency Range</b>	80 MHz to 1000 MHz		
<b>Modulation</b>	<input type="checkbox"/> None <input type="checkbox"/> Pulse <input checked="" type="checkbox"/> AM 1KHz 80%		
<b>Steps</b>	1%		

	Horizontal	Vertical
<b>Front</b>	PASS	PASS
<b>Right</b>	PASS	PASS
<b>Rear</b>	PASS	PASS
<b>Left</b>	PASS	PASS

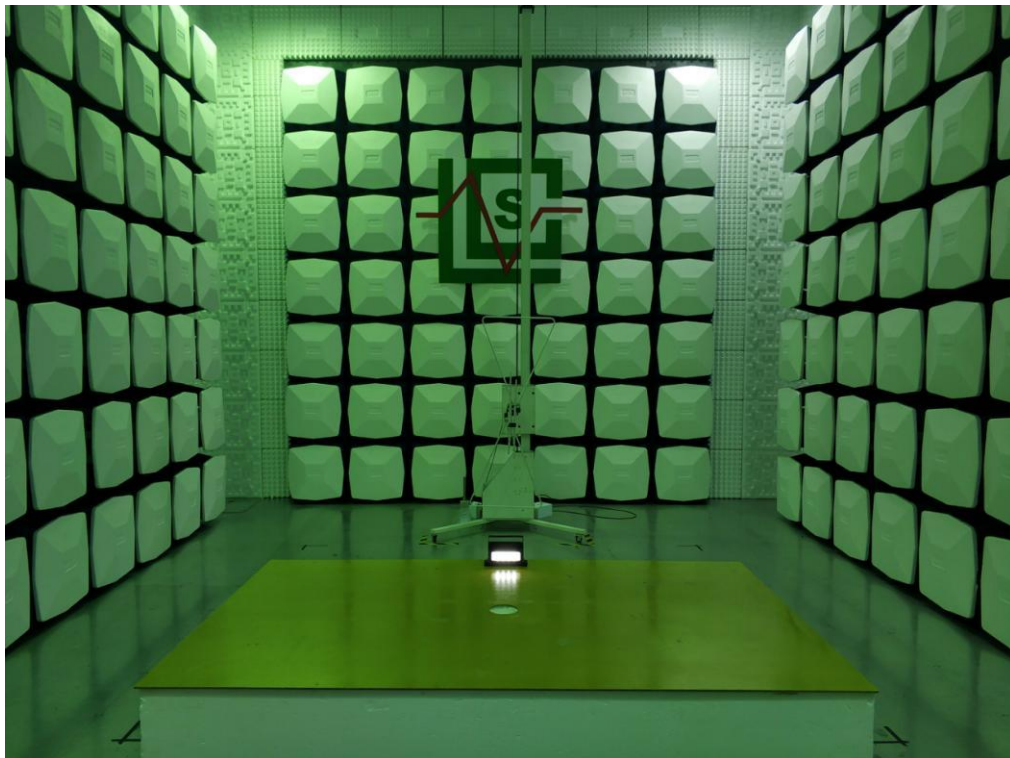
Note:

## 8. PHOTOGRAPH

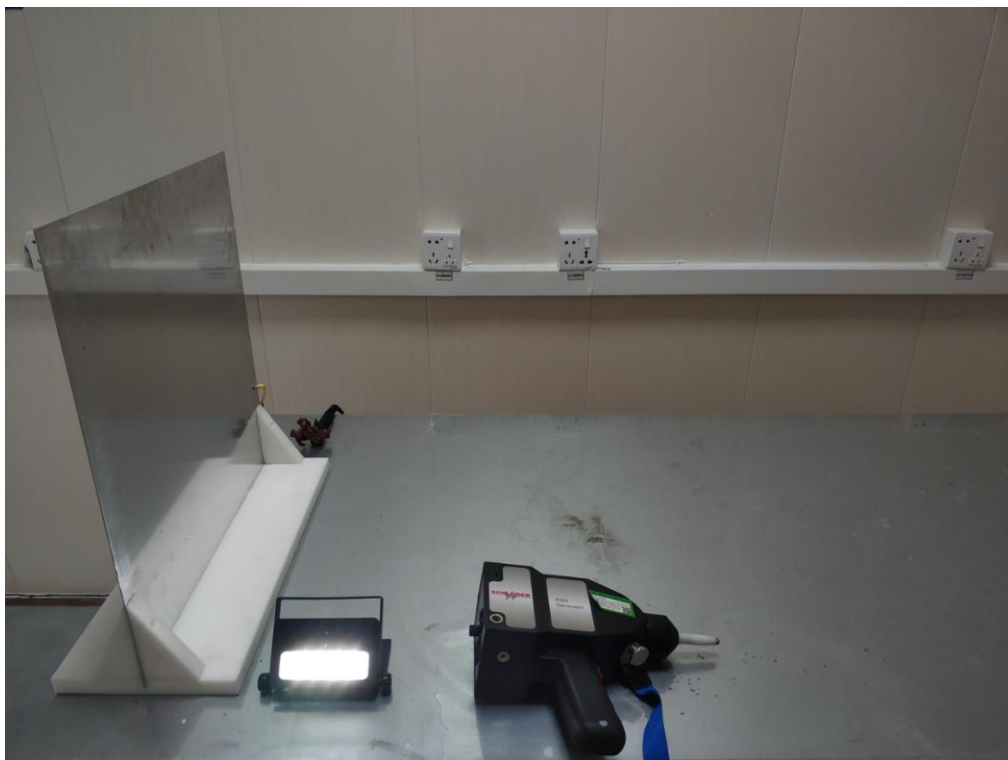
### 8.1. Photo of Radiated Electromagnetic Disturbance Measurement



### 8.2. Photo of Radiated Measurement



### 8.3. Photo of Electrostatic Discharge Test



## 9. EXTERNAL AND INTERNAL PHOTOS OF THE EUT



Fig. 1

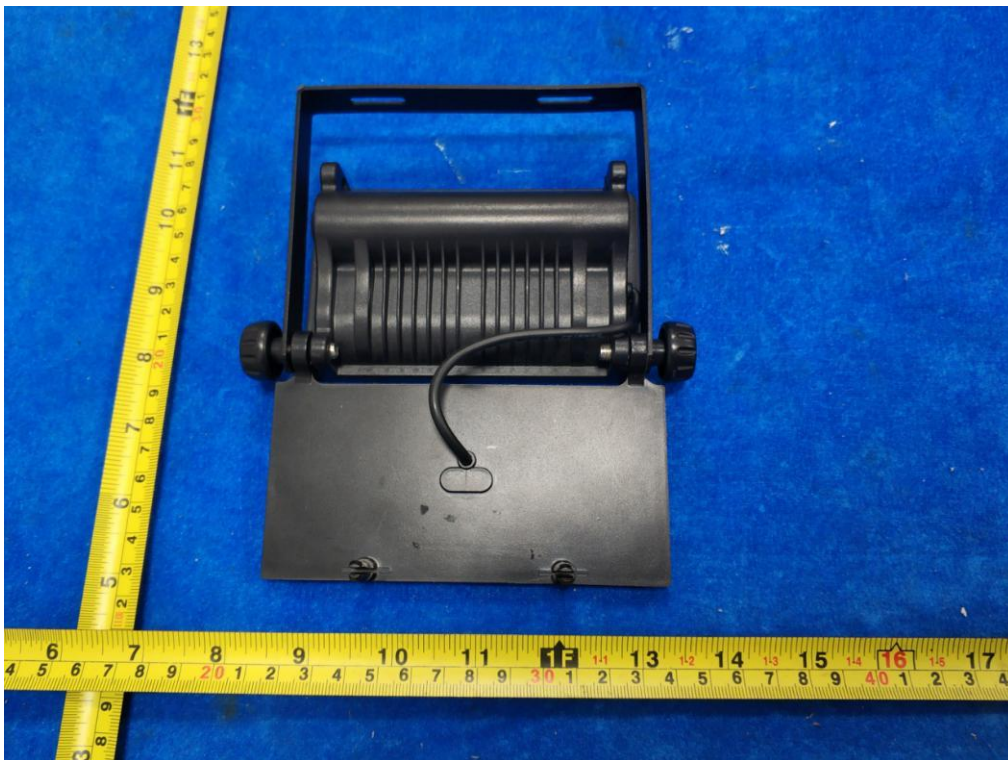


Fig. 2



Fig. 3



Fig. 4



Fig. 5

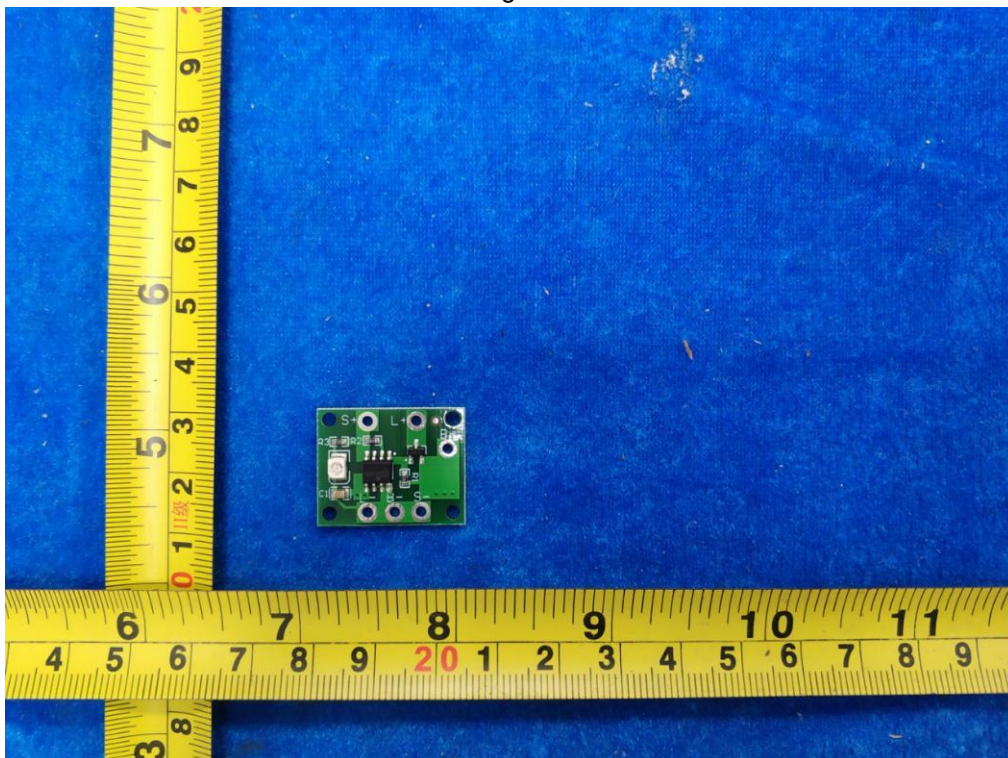


Fig. 6

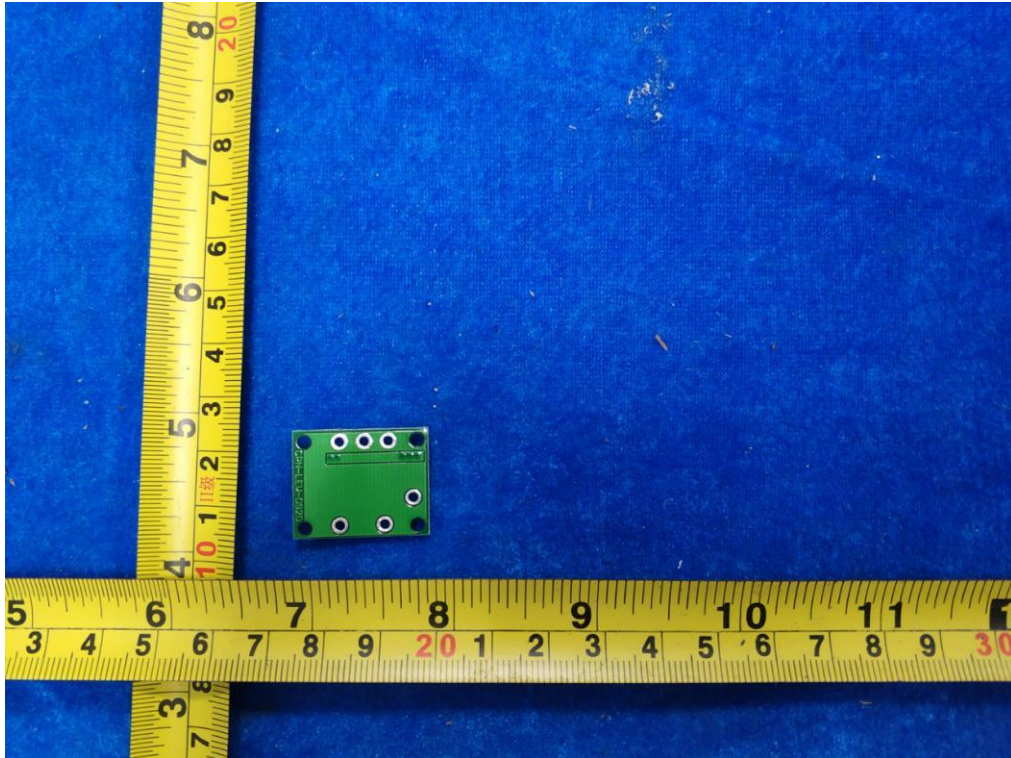


Fig. 7

-----THE END OF TEST REPORT-----