

EMC TEST REPORT
For
Ningbo Amlife Photoelectricity Co., Ltd
S3 pir sensor solar integrated lamp
Test Model: AL-S3 PIR

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. : LCS210406003EE

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 pir sensor solar integrated lamp

Trade Mark..... : N/A

Test Model..... : AL-S3 PIR

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. : LCS210406003EE**April. 09, 2021

Date of issue

Test Model..... : AL-S3 PIR

EUT..... : S3 pir sensor solar integrated lamp

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

Telephone..... : /

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

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Factory..... : Ningbo Amlife Machinery Co., LtdAddress..... : 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 pir sensor solar integrated lamp

Trade Mark : N/A

Test Model : AL-S3 PIR

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 _{lab}) | Expanded uncertainty (U _{cispr}) |
|--|---|--|--|
| Conducted Emission | Level accuracy (9kHz to 150kHz) (150kHz to 30MHz) | ± 2.63 dB ± 2.35 dB | ± 3.8 dB ± 3.4 dB |
| Power disturbance | Level accuracy (30MHz to 300MHz) | ± 2.90dB | ± 4.5 dB |
| Electromagnetic Radiated Emission (3-loop) | Level accuracy (9kHz to 30MHz) | ± 3.60 dB | ± 3.3 dB |
| Radiated Emission | Level accuracy (9kHz to 30MHz) | ± 3.68 dB | N/A |
| Radiated Emission | Level accuracy (30MHz to 1000MHz) | ± 3.48 dB | ± 5.3 dB |
| Radiated Emission | Level accuracy (above 1000MHz) | ± 3.90 dB | ± 5.2 dB |
| Mains Harmonic | Voltage | ± 0.510% | N/A |
| Voltage Fluctuations & Flicker | Voltage | ± 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 |

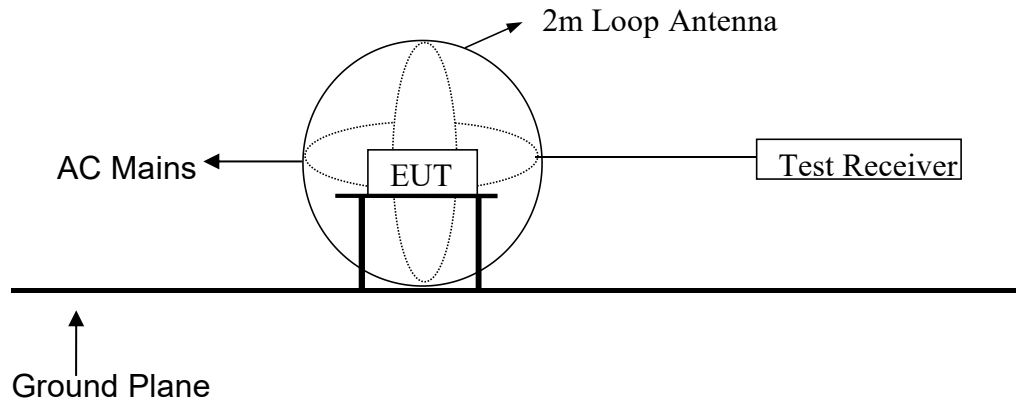
3.4. RF Field Strength Susceptibility

| 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 μ 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.

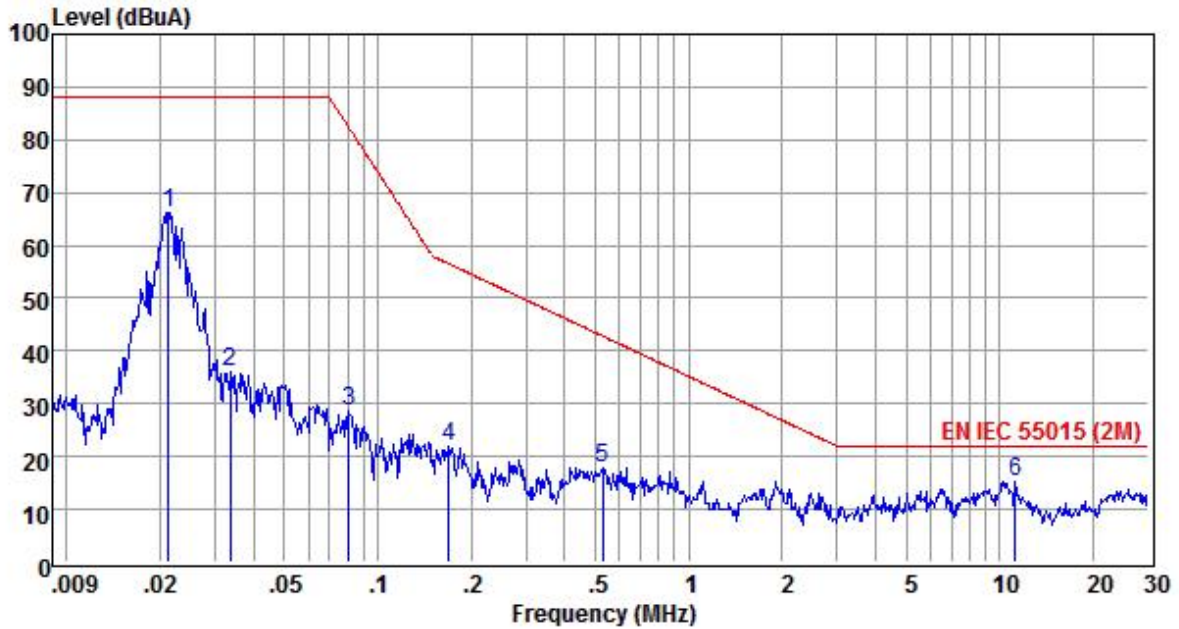
4.6. Test Results

PASS.

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

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

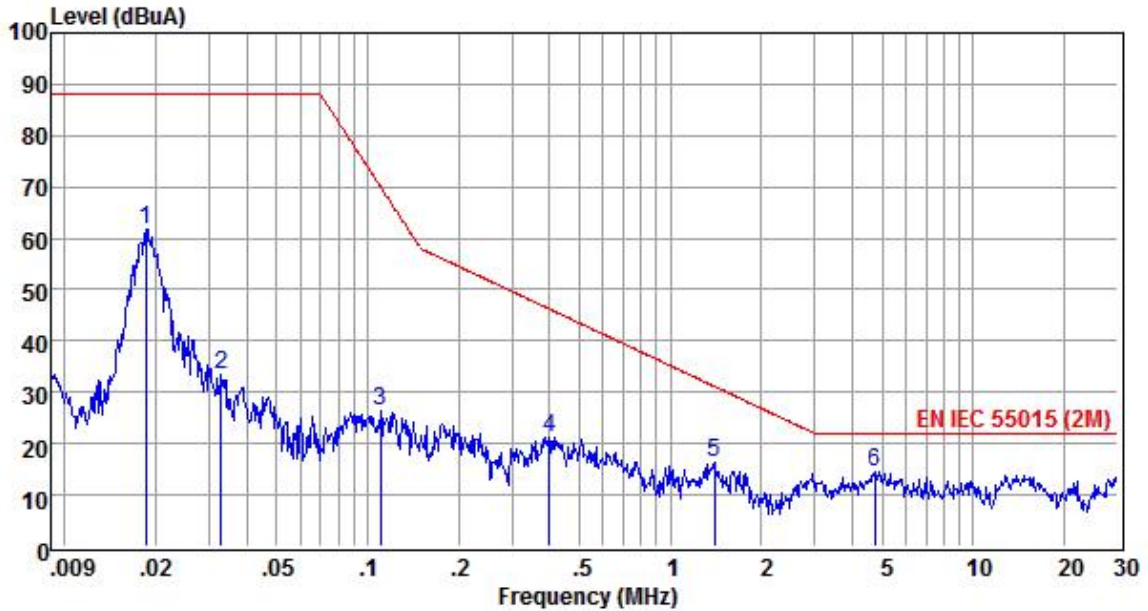
Detailed results are shown below



| | Freq | Reading | LisnFac | CabLos | Measured | Limit | Over | Remark |
|---|-------|---------|---------|--------|----------|-------|--------|--------|
| | MHz | dBpW | dB | dB | dBpW | dBpW | dB | |
| 1 | 0.02 | 66.31 | 0.00 | 0.00 | 66.31 | 88.00 | -21.69 | QP |
| 2 | 0.03 | 36.09 | 0.00 | 0.00 | 36.09 | 88.00 | -51.91 | QP |
| 3 | 0.08 | 28.45 | 0.00 | 0.00 | 28.45 | 82.21 | -53.76 | QP |
| 4 | 0.17 | 21.76 | 0.00 | 0.00 | 21.76 | 56.52 | -34.76 | QP |
| 5 | 0.53 | 17.83 | 0.00 | 0.00 | 17.83 | 42.87 | -25.04 | QP |
| 6 | 11.24 | 15.20 | 0.00 | 0.00 | 15.20 | 22.00 | -6.80 | QP |

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

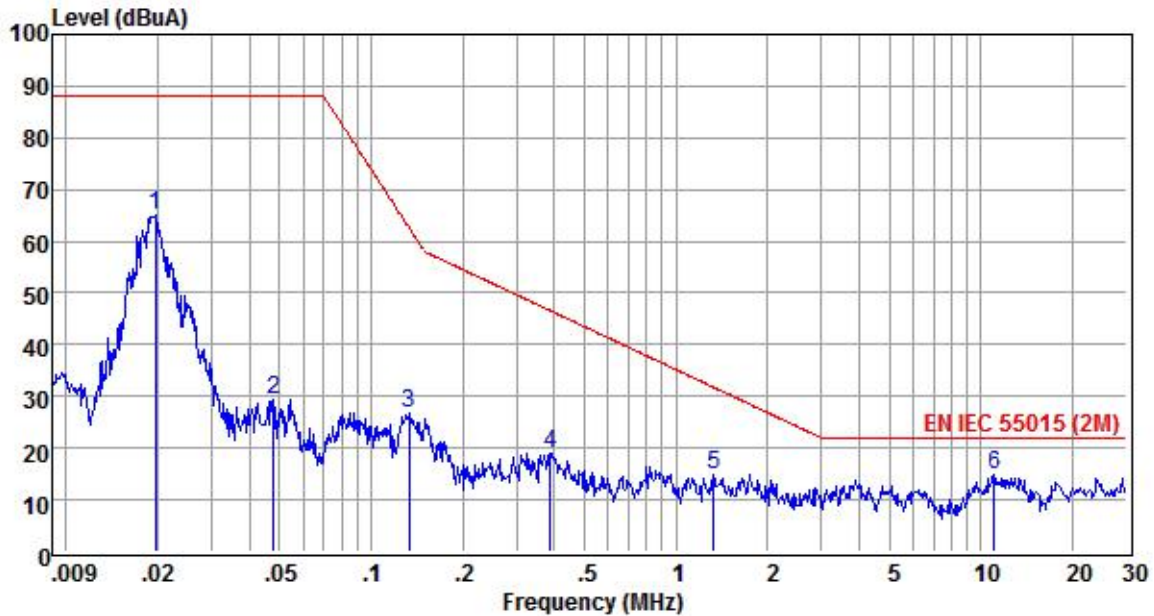
Detailed results are shown below



| | Freq | Reading | LisFac | CabLos | Measured | Limit | Over | Remark |
|---|------|---------|--------|--------|----------|-------|--------|--------|
| | MHz | dBpW | dB | dB | dBpW | dBpW | dB | |
| 1 | 0.02 | 61.85 | 0.00 | 0.00 | 61.85 | 88.00 | -26.15 | QP |
| 2 | 0.03 | 33.54 | 0.00 | 0.00 | 33.54 | 88.00 | -54.46 | QP |
| 3 | 0.11 | 26.43 | 0.00 | 0.00 | 26.43 | 70.08 | -43.65 | QP |
| 4 | 0.40 | 21.20 | 0.00 | 0.00 | 21.20 | 46.29 | -25.09 | QP |
| 5 | 1.40 | 16.22 | 0.00 | 0.00 | 16.22 | 31.18 | -14.96 | QP |
| 6 | 4.72 | 14.65 | 0.00 | 0.00 | 14.65 | 22.00 | -7.35 | QP |

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

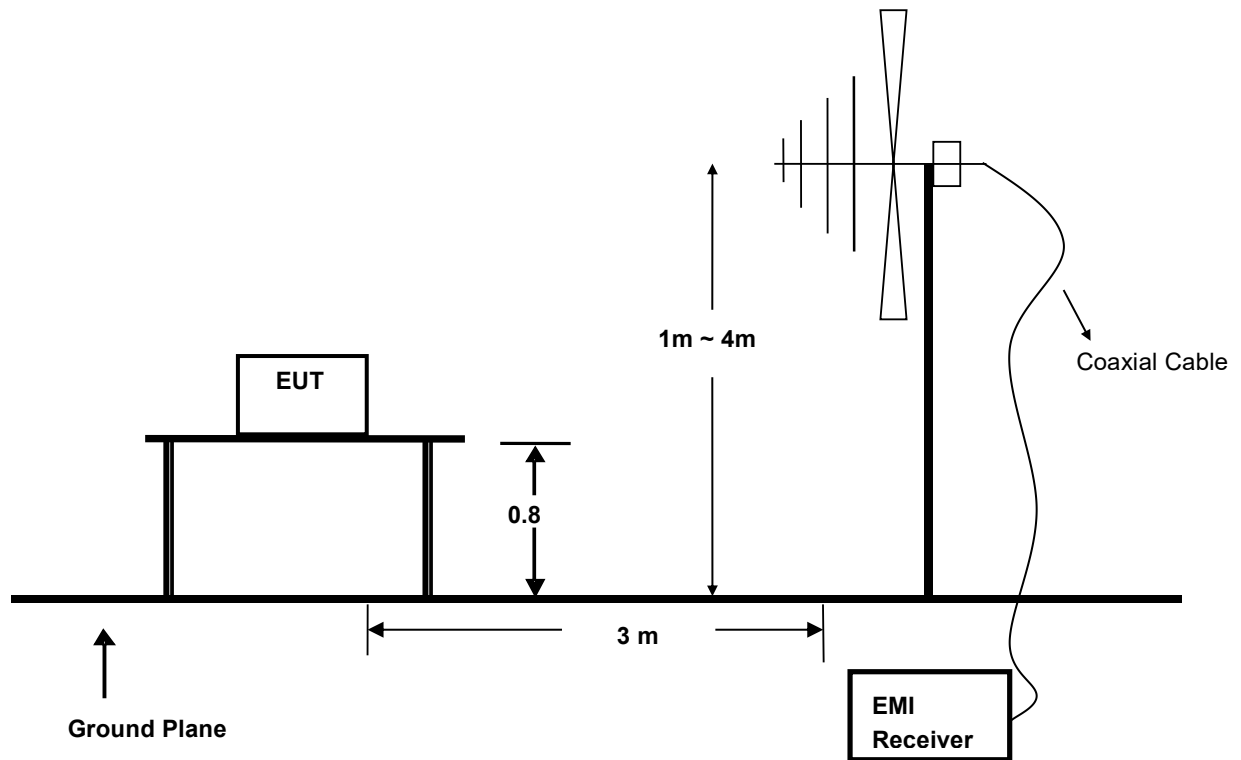
Detailed results are shown below



| | Freq | Reading | LisnFac | CabLos | Measured | Limit | Over | Remark |
|---|-------|---------|---------|--------|----------|-------|--------|--------|
| | MHz | dBpW | dB | dB | dBpW | dBpW | dB | |
| 1 | 0.02 | 65.10 | 0.00 | 0.00 | 65.10 | 88.00 | -22.90 | QP |
| 2 | 0.05 | 29.37 | 0.00 | 0.00 | 29.37 | 88.00 | -58.63 | QP |
| 3 | 0.13 | 26.76 | 0.00 | 0.00 | 26.76 | 62.74 | -35.98 | QP |
| 4 | 0.39 | 19.14 | 0.00 | 0.00 | 19.14 | 46.58 | -27.44 | QP |
| 5 | 1.33 | 14.78 | 0.00 | 0.00 | 14.78 | 31.76 | -16.98 | QP |
| 6 | 11.06 | 14.69 | 0.00 | 0.00 | 14.69 | 22.00 | -7.31 | 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 μ 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.

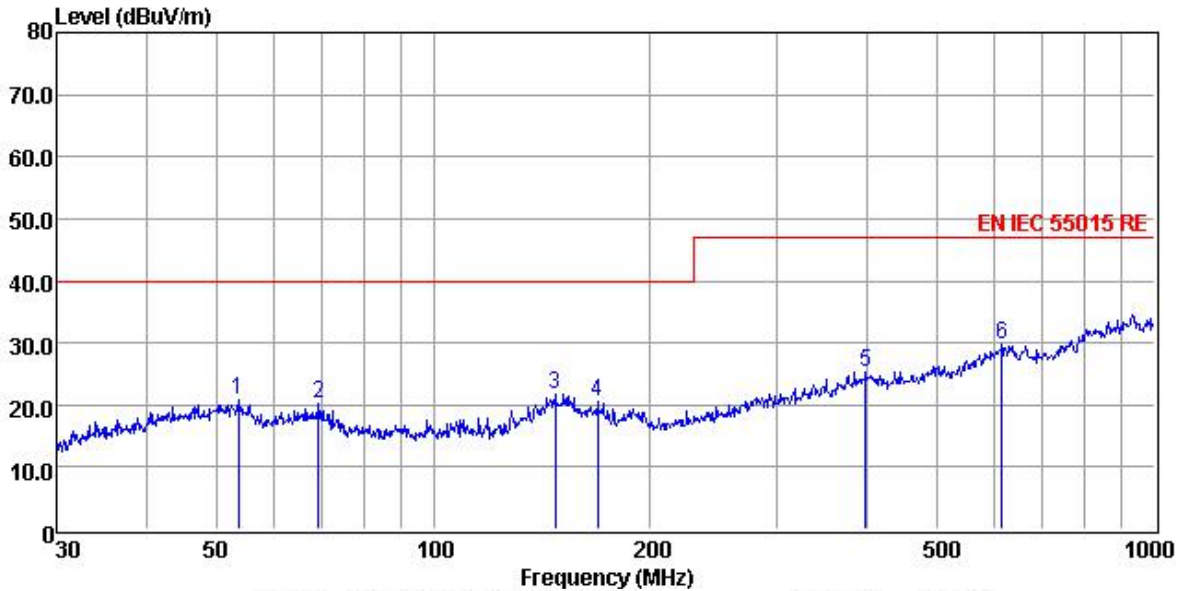
5.7.Test Results

PASS.

The test result please refer to the next page.

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

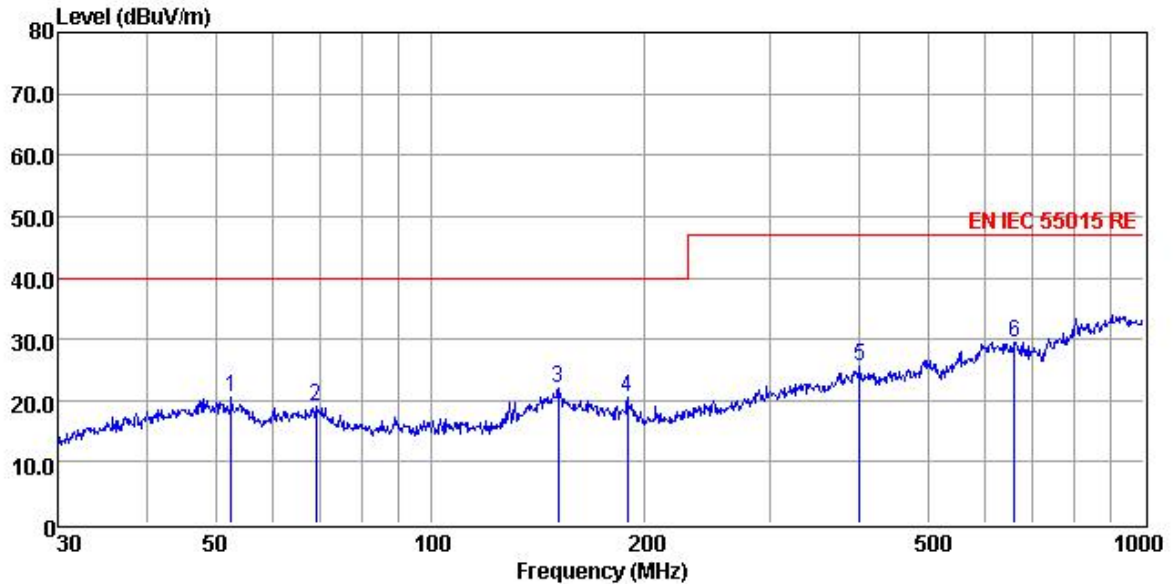
Detailed results are shown below



| | Read Freq | Cable Loss | Antenna Factor | Preamplifier | Level | Limit | Over | Remark |
|---|-----------|------------|----------------|--------------|--------|--------|--------|--------|
| | MHz | dB | dB/m | dB | dBuV/m | dBuV/m | dB | |
| 1 | 53.69 | 2.47 | 13.32 | 30.33 | 20.92 | 40.00 | -19.08 | QP |
| 2 | 69.36 | 2.70 | 12.09 | 30.39 | 20.27 | 40.00 | -19.73 | QP |
| 3 | 147.40 | 3.52 | 13.94 | 30.59 | 21.81 | 40.00 | -18.19 | QP |
| 4 | 169.01 | 3.74 | 12.06 | 30.63 | 20.65 | 40.00 | -19.35 | QP |
| 5 | 397.63 | 5.31 | 16.17 | 31.17 | 25.25 | 47.00 | -21.75 | QP |
| 6 | 614.21 | 5.92 | 20.26 | 31.66 | 29.64 | 47.00 | -17.36 | QP |

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

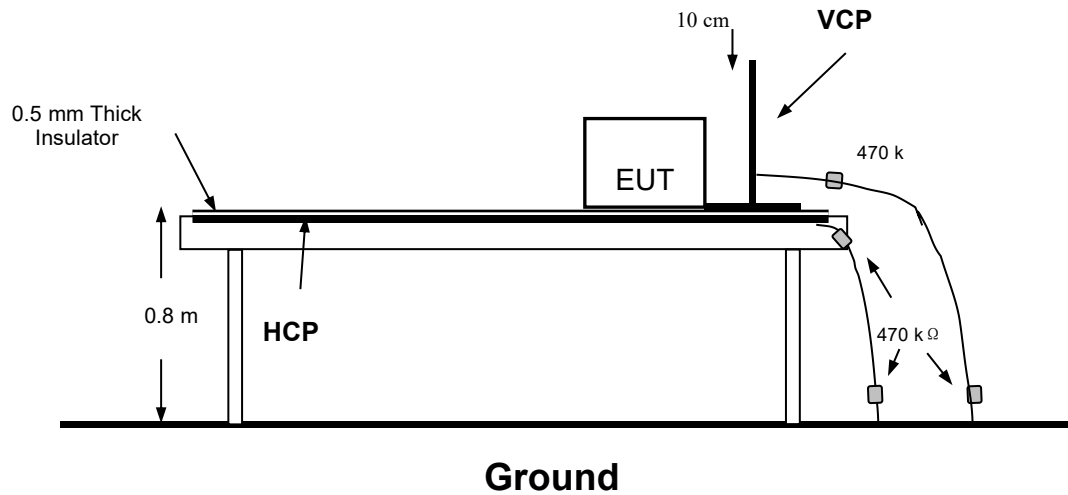
Detailed results are shown below



| | Read Freq | Read Level | Cable Loss | Antenna Factor | Preamplifier Factor | Limit Level | Over Limit | Remark |
|---|-----------|------------|------------|----------------|---------------------|-------------|------------|--------|
| | MHz | dBuV | dB | dB/m | dB | dBuV/m | dB | |
| 1 | 52.58 | 34.94 | 2.45 | 13.37 | 30.33 | 20.43 | -19.57 | QP |
| 2 | 69.11 | 34.50 | 2.70 | 12.08 | 30.39 | 18.89 | -21.11 | QP |
| 3 | 151.07 | 34.96 | 3.55 | 14.12 | 30.60 | 22.03 | -17.97 | QP |
| 4 | 189.07 | 35.73 | 3.93 | 11.51 | 30.67 | 20.50 | -19.50 | QP |
| 5 | 400.43 | 35.17 | 5.31 | 16.27 | 31.18 | 25.57 | -21.43 | QP |
| 6 | 658.84 | 34.85 | 6.10 | 20.37 | 31.73 | 29.59 | -17.41 | 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, ±8KV
Contact Discharge: Level 2, ±4KV)

6.3. Severity Levels and Performance Criterion

6.3.1. Severity level

| Level | Test Voltage Contact Discharge (KV) | Test Voltage Air Discharge (KV) |
|-------|--|------------------------------------|
| 1. | ±2 | ±2 |
| 2. | ±4 | ±4 |
| 3. | ±6 | ±8 |
| 4. | ±8 | ±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

| | | | |
|------------------|---|----------------------|------------|
| Standard | <input type="checkbox"/> IEC 61000-4-2 <input checked="" type="checkbox"/> EN 61000-4-2 | | |
| Applicant | Ningbo Amlife Photoelectricity Co., Ltd | | |
| EUT | S3 pir sensor solar integrated lamp | Temperature | 21.4°C |
| M/N | AL-S3 PIR | Humidity | 55.5% |
| Criterion | B | Pressure | 1021mbar |
| Test Mode | Lighting | Test Engineer | 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 |

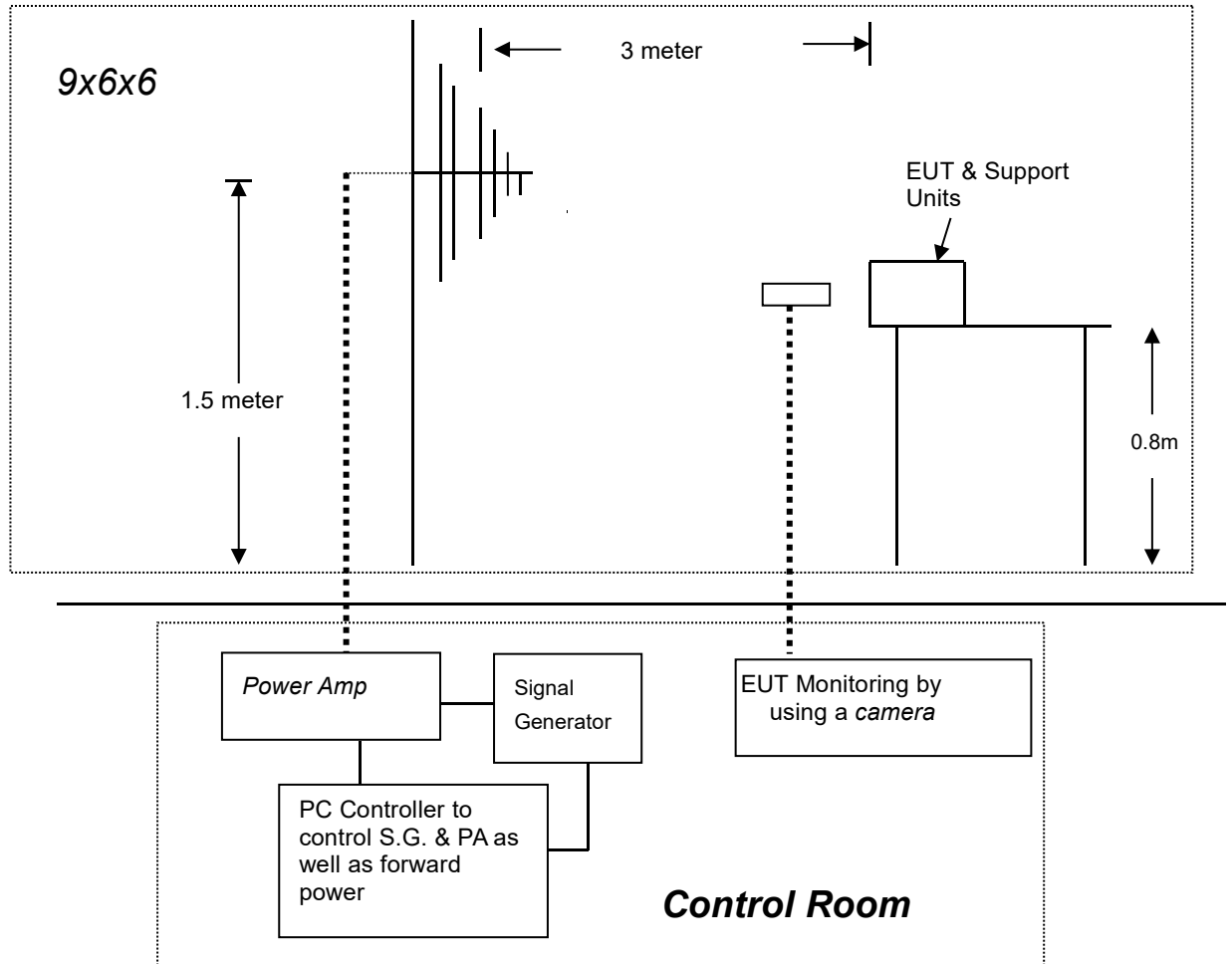
| Contact Discharge | | | | | | |
|-------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--|--|
| Test Points | Test Levels | | Results | | | |
| | ± 2 KV | ±4 KV | Pass | Fail | Performance Criterion | |
| 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

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

| | Horizontal | Vertical |
|--------------|------------|----------|
| Front | PASS | PASS |
| Right | PASS | PASS |
| Rear | PASS | PASS |
| Left | PASS | PASS |

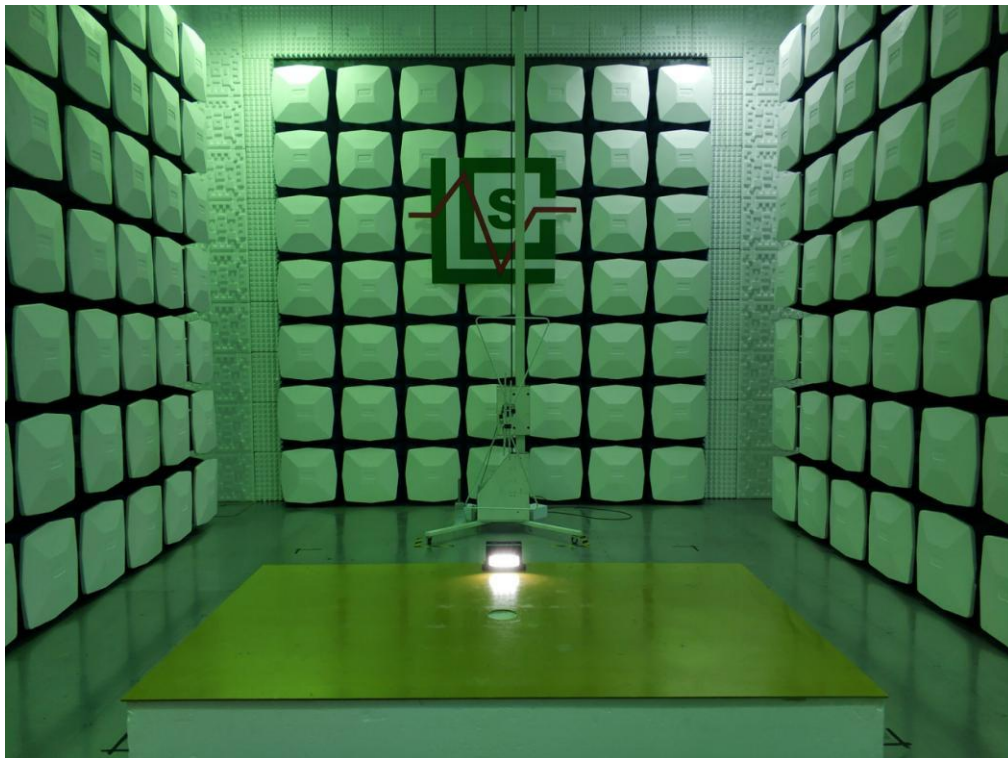
Note:

8. PHOTOGRAPH

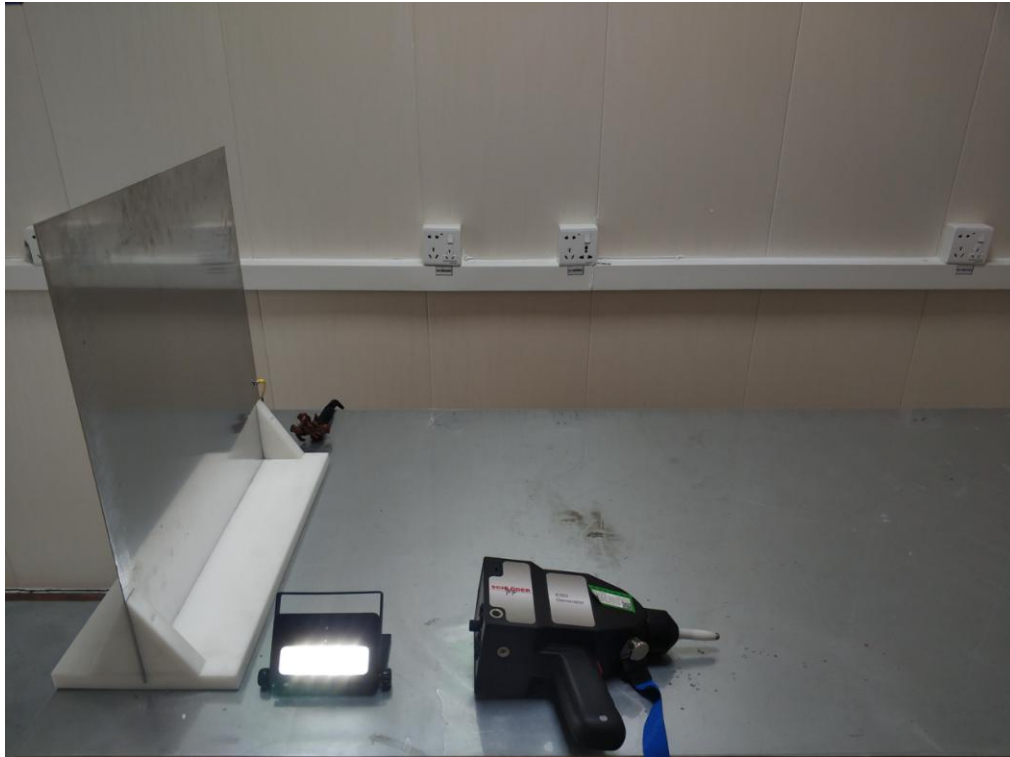
8.1. Photo of Radiated Electromagnetic Disturbance Measurement



8.2. Photo of Radiated Measurement



8.3. Photo of Electrostatic Discharge Test



9. EXTERNAL AND INTERNAL PHOTOS OF THE EUT



Fig. 1

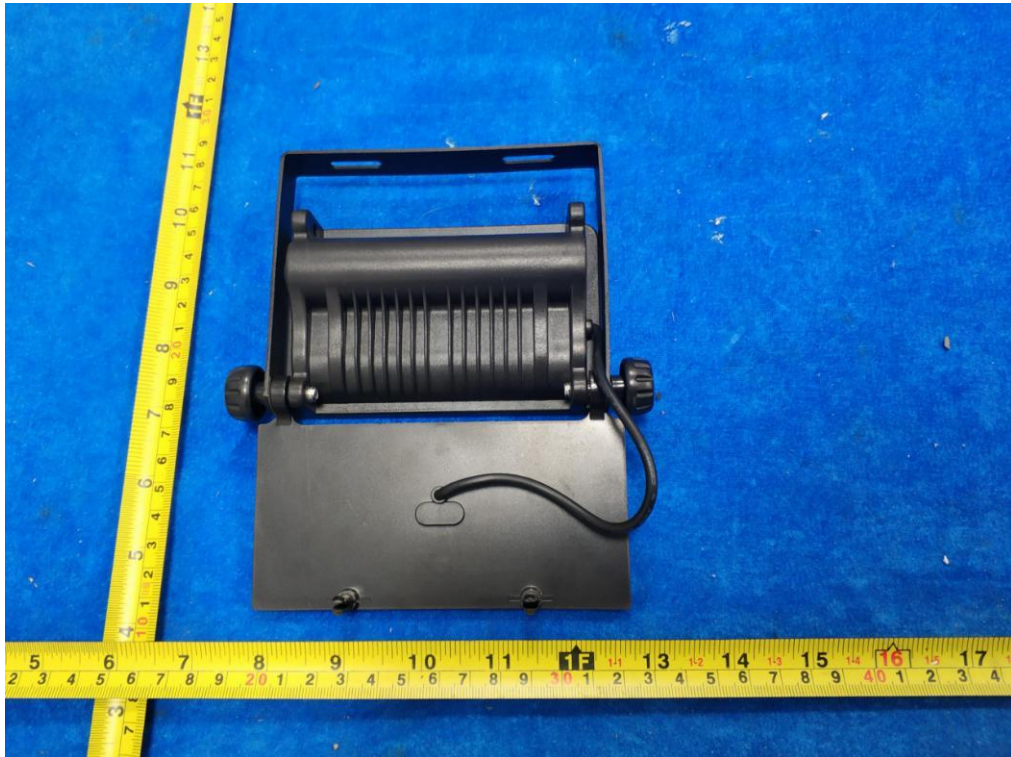


Fig. 2



Fig. 3



Fig. 4



Fig. 5

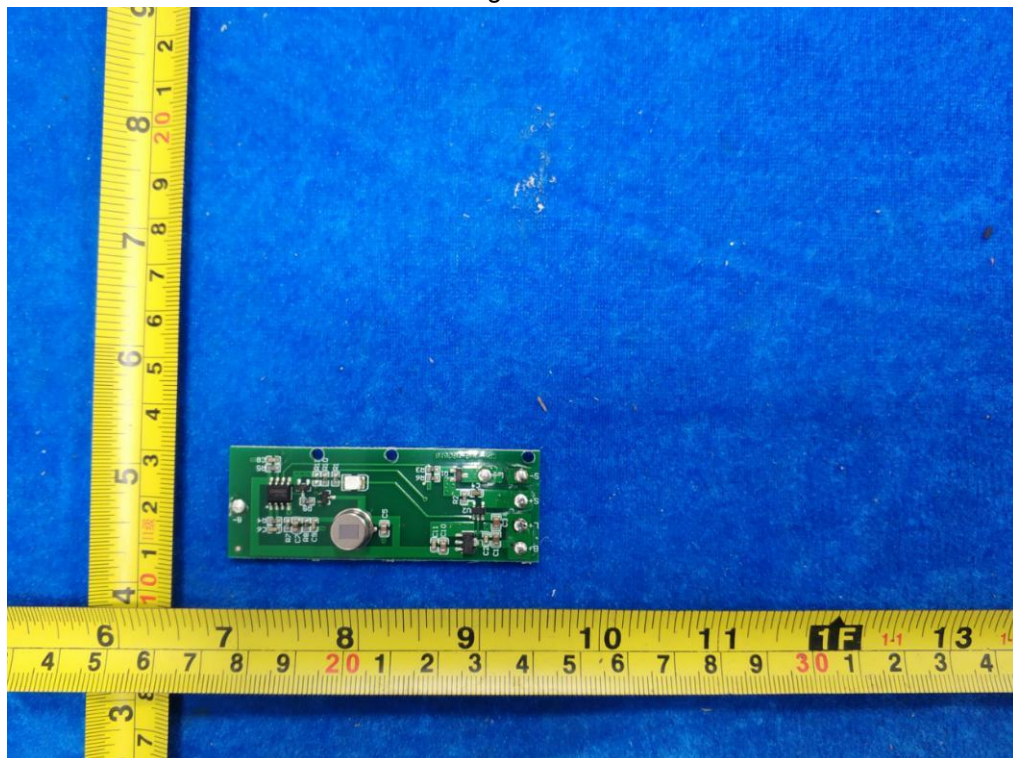


Fig. 6

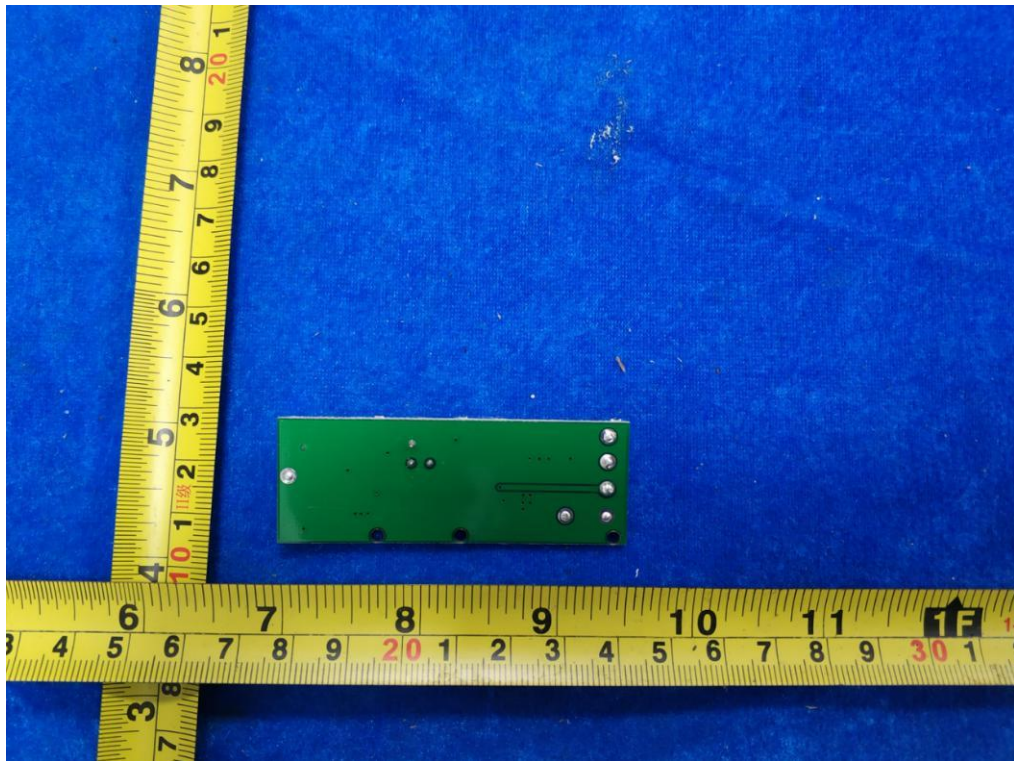


Fig. 7

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