# FCC TEST REPORT
For

## Zhongshan big blue elephant Lighting Co., Ltd

## LED Flood Light

## Test Model: TG-01

## Additional Model No.: TG-02, TG-03, TG-04, TG-05, TG-06, TG-07, TG-08, TG-09, TG-10

| | | |
|---|---|---|
| Prepared for | : | Zhongshan big blue elephant Lighting Co., Ltd |
| Address | : | 2nd Floor, Building 1, No. 133, North Zhongxing Avenue, Guzhen Town, Zhongshan City |
| Prepared by | : | Shenzhen AOCE Electronic Technology Service Co., Ltd. |
| Address | : | Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China |
| Tel | : | (+86)755-85277785 |
| Fax | : | (+86)755-23705230 |
| Web | : | www.aoc-cert.com |
| Mail | : | postmaster@aoc-cert.com |
| Date of receipt of test sample | : | May 24, 2022 |
| Number of tested samples | : | 1 |
| Serial number | : | Prototype |
| Date of Test | : | May 24, 2022 - July 16, 2025 |
| Date of Report | : | July 16, 2025 |

**FCC TEST REPORT**
**FCC 47 CFR Part 15 Subpart B, Class B(SDoC), ANSI C63.4 -2014**

| | |
|---|---|
| **Report Reference No. .....:** | **AOC220601102F** |
| Date Of Issue.....: | July 16, 2025 |
| **Testing Laboratory Name.....:** | **Shenzhen AOCE Electronic Technology Service Co., Ltd.** |
| Address.....: | Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China |
| Testing Location/ Procedure.....: | Full application of Harmonised standards ■<br>Partial application of Harmonised standards □<br>Other standard testing method □ |
| **Applicant's Name..... :** | Zhongshan big blue elephant Lighting Co., Ltd |
| Address.....: | 2nd Floor, Building 1, No. 133, North Zhongxing Avenue, Guzhen Town, Zhongshan City |
| **Test Specification:** | |
| Standard.....: | FCC 47 CFR Part 15 Subpart B, Class B(SDoC), ANSI C63.4 -2014 |
| Test Report Form No.....: | AOCEMC-1.0 |
| TRF Originator.....: | Shenzhen AOCE Electronic Technology Service Co., Ltd. |
| Master TRF.....: | Dated 2011-03 |



| | |
|---|---|
| **Test Item Description..... :** | LED Flood Light |
| Trade Mark..... : | N/A |
| Model/ Type Reference..... : | TG-01 |
| Ratings.....: | Input: AC 85-265V, 50/60Hz, 150W<br>Output: DC 72V, 0.28A |
| **Result .....:** | **Pass** |

| **Compiled by:** | **Supervised by:** | **Approved by:** |
|---|---|---|
| David Liu | Kevin Huang | Jackson Fang |
| David Liu/ File administrators | Kevin Huang/ Technique principal | Jackson Fang/ Manager |

# FCC -- TEST REPORT

| **Test Report No. : AOC220601102F** | July 16, 2025<br>Date of issue |
|---|---|

| | | |
|---|---|---|
| Type / Model..... | : | TG-01 |
| EUT..... | : | LED Flood Light |
| **Applicant.....** | **:** | Zhongshan big blue elephant Lighting Co., Ltd |
| Address..... | : | 2nd Floor, Building 1, No. 133, North Zhongxing Avenue, Guzhen Town, Zhongshan City |
| Telephone..... | : | / |
| Fax..... | : | / |
| **Manufacturer.....** | **:** | Zhongshan big blue elephant Lighting Co., Ltd |
| Address..... | : | 2nd Floor, Building 1, No. 133, North Zhongxing Avenue, Guzhen Town, Zhongshan City |
| Telephone..... | : | / |
| Fax..... | : | / |
| **Factory.....** | **:** | Zhongshan big blue elephant Lighting Co., Ltd |
| Address..... | : | 2nd Floor, Building 1, No. 133, North Zhongxing Avenue, Guzhen Town, Zhongshan City |
| Telephone..... | : | / |
| Fax..... | : | / |

**Test Result** according to the standards on page 5: **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.

# TABLE OF CONTENT

Test Report Description Page

# 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 | | | |
|---|---|---|---|
| **Description of Test Item** | **Standard** | **Limits** | **Results** |
| Conducted disturbance at mains terminals | FCC 47 CFR Part 15 Subpart B, Class B(SDoC), ANSI C63.4 -2014 | Class B | PASS |
| Radiated disturbance | FCC 47 CFR Part 15 Subpart B, Class B(SDoC), ANSI C63.4 -2014 | Class B | PASS |
| N/A is an abbreviation for Not Applicable. | | | |

# 2. GENERAL INFORMATION

## 2.1.Description of Device (EUT)

EUT : LED Flood Light

Model Number : TG-01

Power Supply : Input: AC 85-265V, 50/60Hz, 150W
Output: DC 72V, 0.28A

## 2.2.Description of Support Device

| Name | Manufacturers | M/N | S/N |
|---|---|---|---|
| --- | --- | --- | --- |

## 2.3.Description of Test Facility

Site Description
EMC Lab. : ---

## 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 | | Parameters | Expanded Uncertainty (Ulab) | Expanded Uncertainty (Ucispr) |
|---|---|---|---|---|
| Conducted Emission | : | Level accuracy (9kHz to 150kHz) (150kHz to 30MHz) | ±2.63 dB<br>±2.35 dB | ±3.8 dB<br>±3.4 dB |
| Power Disturbance | : | Level accuracy (30MHz to 300MHz) | ±2.90dB | ±4.5 dB |
| Radiated Emission | : | Level accuracy (9kHz to 200MHz) | ±3.68 dB | N/A |
| Radiated Emission | | Level accuracy (200Hz to 1000MHz) | ±3.48 dB | ±5.3 dB |
| Radiated Emission | | Level accuracy (above 1000MHz) | ±3.90 dB | ±5.2 dB |

（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.TEST RESULTS

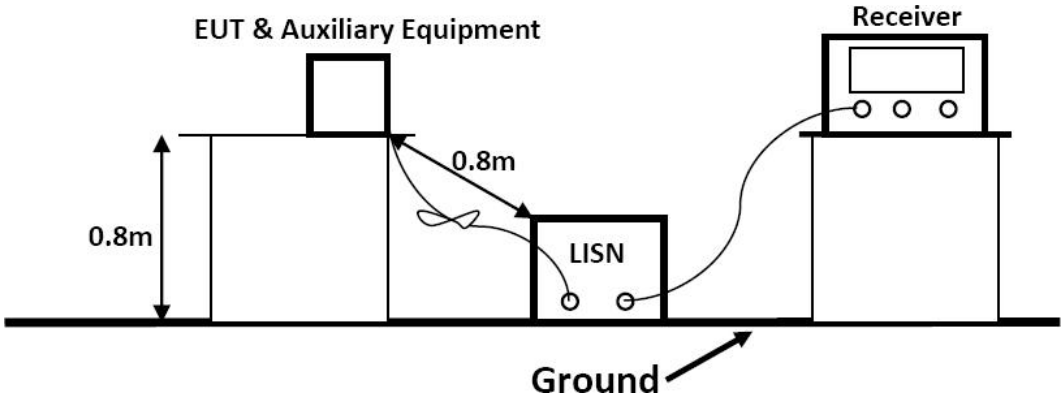
## 3.1. POWER LINE CONDUCTED EMISSION MEASUREMENT

### 3.1.1. Test Equipment

The following test equipments are used during the power line conducted measurement:

| Item | Equipment | Manufacturer | Model No. | Serial No. | Cal Date | Due Date |
|---|---|---|---|---|---|---|
| 1 | EMI Test Software | EZ | EZ-EMC | / | N/A | N/A |
| 2 | EMI Test Receiver | R&S | ESPI | 101840 | 2022/04/25 | 2023/04/24 |
| 3 | Artificial Mains | R&S | ENV216 | 101288 | 2022/04/25 | 2023/04/24 |
| 4 | 10dB Attenuator | SCHWARZBECK | MTS-IMP-136 | 261115-001-0032 | 2022/04/25 | 2023/04/24 |
| 5 | Impedance Stabilization Network | TESEQ | ISN T800 | 45130 | 2022/04/25 | 2023/04/24 |

### 3.1.2. Block Diagram of Test Setup




### 3.1.3. Test Standard

Power Line Conducted Emission Limits (Class B)

| Frequency (MHz) | | | Limit (dBμV) | |
|---|---|---|---|---|
| | | | Quasi-peak Level | Average Level |
| 0.15 | ~ | 0.50 | 66.0 ~ 56.0 * | 56.0 ~ 46.0 * |
| 0.50 | ~ | 5.00 | 56.0 | 46.0 |
| 5.00 | ~ | 30.00 | 60.0 | 50.0 |
| NOTE1-The lower limit shall apply at the transition frequencies.<br>NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz. | | | | |

### 3.1.4. EUT Configuration on Test

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

### 3.1.5. Operating Condition of EUT

#### 3.1.5.1. Setup the EUT as shown on Section

#### 3.1.5.2.Turn on the power of all equipments.

#### 3.1.5.3.Let the EUT work in measuring Working and measure it.

### 3.1.6. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC/ANSI C63.4-2014 on Conducted Emission Measurement.

The bandwidth of the test receiver is set at 9kHz.

The frequency range from 150kHz to 30MHz is investigated

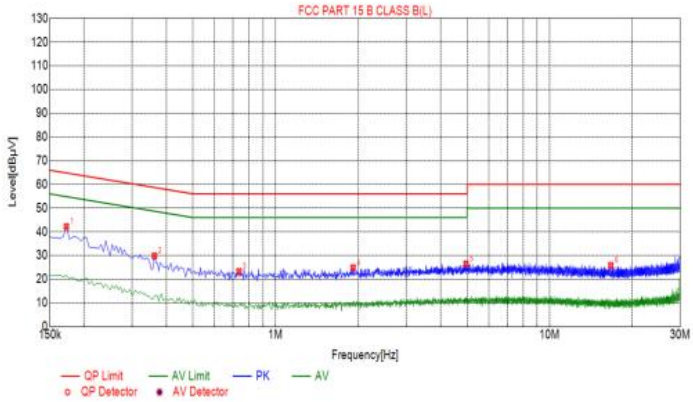
### 3.1.7.Test Results

**PASS.**

The test result please refer to the next page.

| **Model No.** | TG-01 | **Test Date** | July 16, 2025 |
|---|---|---|---|
| **Environmental Conditions** | 24℃/ 56% RH | **Test Mode** | Working |
| **Pol** | Line | **Detector Function** | Quasi-peak |
| **Test Engineer** | Andy | **Test Voltage** | AC 240V/60Hz |

**Test Graph**

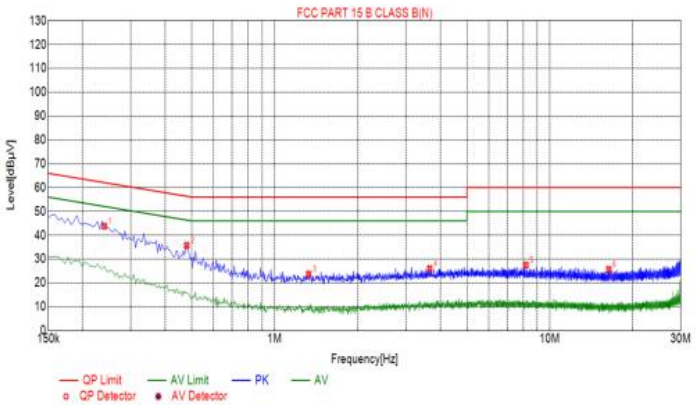



Suspected List

| NO. | Freq. [MHz] | Level [dBµV] | Factor [dB] | Limit [dBµV] | Margin [dB] | Reading [dBµV] | Detector | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.1725 | 42.20 | 20.04 | 64.84 | 22.64 | 22.16 | PK | L |
| 2 | 0.3615 | 29.84 | 20.04 | 58.69 | 28.85 | 9.80 | PK | L |
| 3 | 0.7350 | 23.24 | 20.06 | 56.00 | 32.76 | 3.18 | PK | L |
| 4 | 1.9185 | 24.85 | 20.14 | 56.00 | 31.15 | 4.71 | PK | L |
| 5 | 4.9560 | 26.52 | 20.26 | 56.00 | 29.48 | 6.26 | PK | L |
| 6 | 16.7370 | 25.84 | 19.99 | 60.00 | 34.16 | 5.85 | PK | L |

| **Model No.** | TG-01 | **Test Date** | July 16, 2025 |
|---|---|---|---|
| **Environmental Conditions** | 24℃/ 56% RH | **Test Mode** | Working |
| **Pol** | Line | **Detector Function** | Quasi-peak |
| **Test Engineer** | Andy | **Test Voltage** | AC 240V/60Hz |

**Test Graph**




Suspected List

| NO. | Freq. [MHz] | Level [dBµV] | Factor [dB] | Limit [dBµV] | Margin [dB] | Reading [dBµV] | Detector | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.2400 | 43.81 | 20.03 | 62.10 | 18.29 | 23.78 | PK | N |
| 2 | 0.4785 | 35.73 | 20.04 | 56.37 | 20.64 | 15.69 | PK | N |
| 3 | 1.3290 | 23.70 | 20.10 | 56.00 | 32.30 | 3.60 | PK | N |
| 4 | 3.6600 | 25.95 | 20.25 | 56.00 | 30.05 | 5.70 | PK | N |
| 5 | 8.1960 | 27.47 | 20.14 | 60.00 | 32.53 | 7.33 | PK | N |
| 6 | 16.4040 | 25.62 | 19.99 | 60.00 | 34.38 | 5.63 | PK | N |

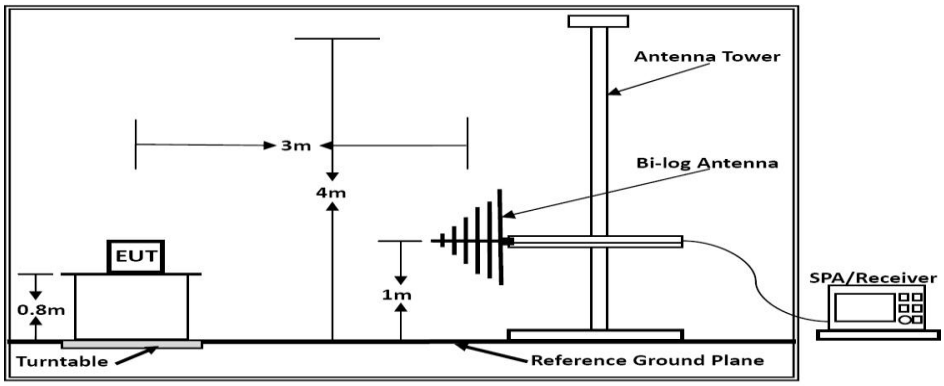
3.2. Radiated emission Measurement

3.2.1Test Equipment

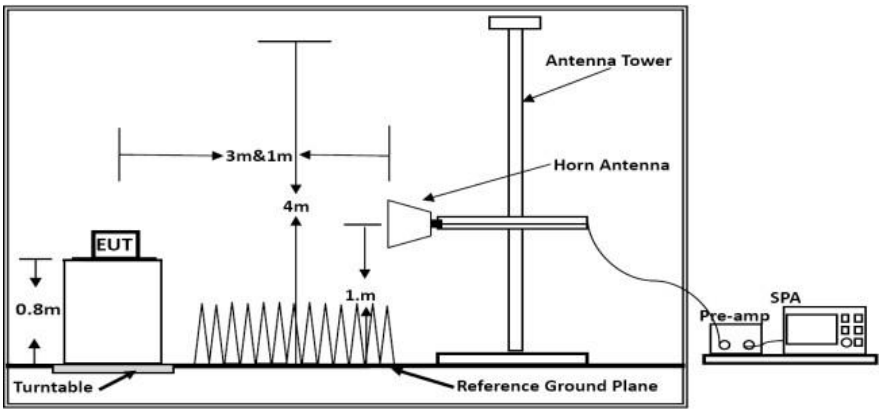
The following test equipments are used during the radiated emission measurement:

| Item | Equipment | Manufacturer | Model No. | Serial No. | Cal Date | Due Date |
|---|---|---|---|---|---|---|
| 1 | EMI Test Software | EZ | EZ-EMC | / | N/A | N/A |
| 2 | By-log Antenna | SCHWARZBECK | VULB9163 | 9163-470 | 2022/04/25 | 2023/04/24 |
| 3 | Horn Antenna | SCHWARZBECK | BBHA 9120D | 9120D-1925 | 2022/04/25 | 2023/04/24 |
| 4 | EMI Test Receiver | R&S | ESR 7 | 101181 | 2022/04/25 | 2023/04/24 |
| 5 | Broadband Preamplifier | / | BP-01M18G | P190501 | 2022/04/25 | 2023/04/24 |

3.2.2.Block Diagram of Test Setup




Below 1GHz




Above 1GHz

### 3.2.3. Radiated Emission Limit (Class B)

Limits for Radiated Disturbance Below 1GHz

| FREQUENCY MHz | DISTANCE Meters | FIELD STRENGTHS LIMIT | |
|---|---|---|---|
| | | μV/m | dB(μV)/m |
| 30 ~ 88 | 3 | 100 | 40 |
| 88 ~ 216 | 3 | 150 | 43.5 |
| 216 ~ 960 | 3 | 200 | 46 |
| 960 ~ 1000 | 3 | 500 | 54 |
| Remark：(1) Emission level (dB)μV = 20 log Emission level μV/m<br>(2) The smaller limit shall apply at the cross point between two frequency bands.<br>(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system. | | | |
| Limits for Radiated Emission Above 1GHz | | | |
| Frequency (MHz) | Distance (Meters) | Peak Limit (dBμV/m) | Average Limit (dBμV/m) |
| Above 1000 | 3 | 74 | 54 |
| ***Note: The lower limit applies at the transition frequency. | | | |

### 3.2.4. EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 3.2.5. Operating Condition of EUT

1.1.1.1. Setup the EUT as shown in Section 3.2.2.
3.2.5.2.Let the EUT work in test Mode 1 and measure it.

### 3.2.6. Test Procedure

EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated by-log antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2014 on radiated emission measurement.

The bandwidth of the EMI test receiver is set at 120kHz, 300kHz.

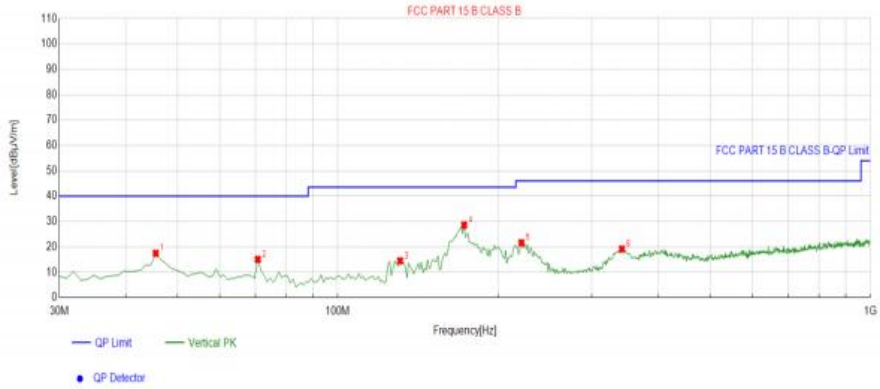
The frequency range from 30MHz to 1000MHz is checked.

### 3.2.7. Radiated Emission Noise Measurement Result

PASS.

The scanning waveforms please refer to the next page.

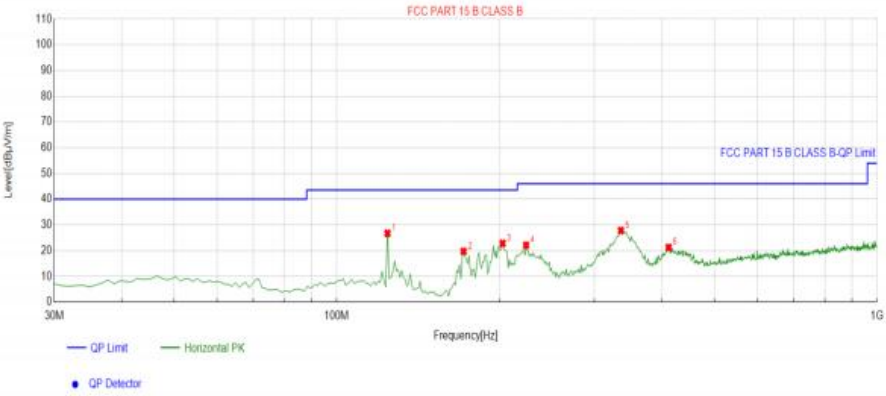
| **Model No.** | TG-01 | **Test Date** | July 16, 2025 |
|---|---|---|---|
| **Environmental Conditions** | 24℃/ 56% RH | **Test Mode** | ON |
| **Pol** | Vertical | **Detector Function** | Quasi-peak |
| **Test Engineer** | Andy | **Distance** | 3m |




**Suspected List**

| Suspected List | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | Freq. [MHz] | Factor [dB] | Reading [dBµV/m] | Level [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity |
| 1 | 45.5355 | -13.65 | 31.13 | 17.48 | 40.00 | 22.52 | 100 | 33 | Vertical |
| 2 | 70.7808 | -17.81 | 32.88 | 15.07 | 40.00 | 24.93 | 100 | 304 | Vertical |
| 3 | 130.9810 | -18.63 | 33.14 | 14.51 | 43.50 | 28.99 | 100 | 291 | Vertical |
| 4 | 172.7327 | -18.16 | 46.79 | 28.63 | 43.50 | 14.87 | 100 | 102 | Vertical |
| 5 | 221.2813 | -14.53 | 36.16 | 21.63 | 46.00 | 24.37 | 100 | 60 | Vertical |
| 6 | 341.6817 | -11.65 | 30.82 | 19.17 | 46.00 | 26.83 | 100 | 352 | Vertical |

| **Model No.** | TG-01 | **Test Date** | July 16, 2025 |
|---|---|---|---|
| **Environmental Conditions** | 24℃/ 56% RH | **Test Mode** | ON |
| **Pol** | Horizontal | **Detector Function** | Quasi-peak |
| **Test Engineer** | Andy | **Distance** | 3m |




**Suspected List**

| Suspected List | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| NO. | Freq. [MHz] | Factor [dB] | Reading [dBµV/m] | Level [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity |
| 1 | 124.1842 | -17.72 | 44.47 | 26.75 | 43.50 | 16.75 | 100 | 55 | Horizontal |
| 2 | 171.7618 | -18.33 | 38.04 | 19.71 | 43.50 | 23.79 | 100 | 273 | Horizontal |
| 3 | 202.8328 | -14.99 | 37.82 | 22.83 | 43.50 | 20.67 | 100 | 71 | Horizontal |
| 4 | 224.1942 | -14.46 | 36.57 | 22.11 | 46.00 | 23.89 | 100 | 95 | Horizontal |
| 5 | 335.8559 | -11.62 | 39.43 | 27.81 | 46.00 | 18.19 | 100 | 71 | Horizontal |
| 6 | 411.5916 | -10.19 | 31.44 | 21.25 | 46.00 | 24.75 | 100 | 75 | Horizontal |

# 4. PHOTOGRAPH

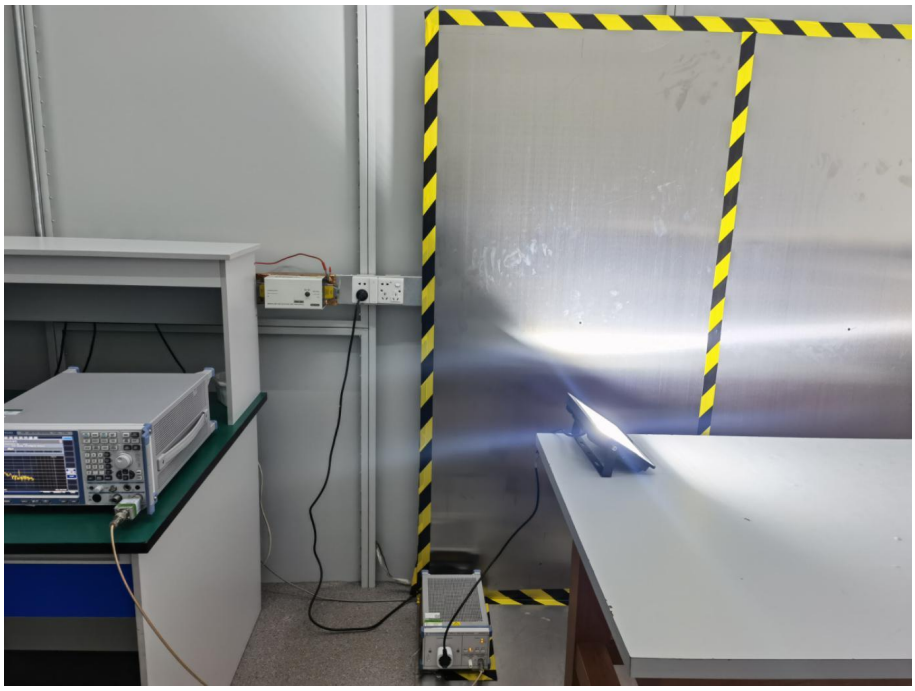


Fig.1

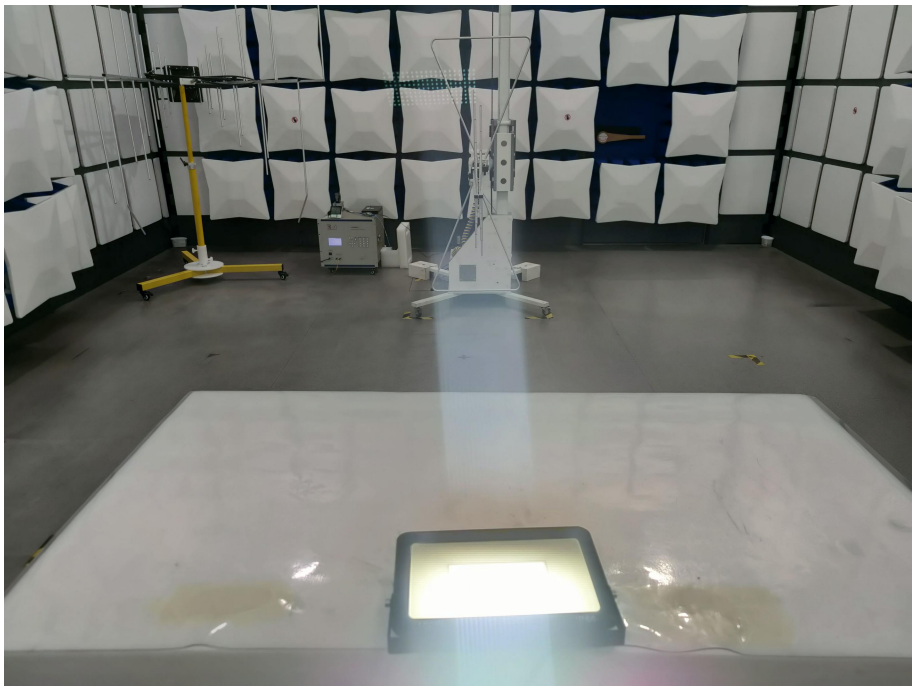


Fig.2

# 5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

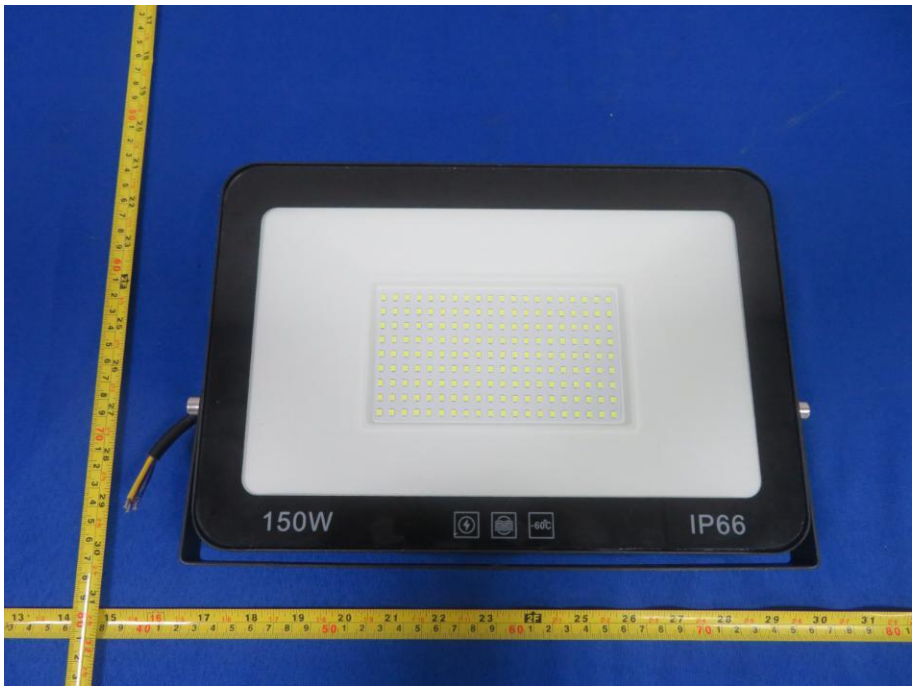



Fig.1

Fig.2


Fig.3

Fig.4

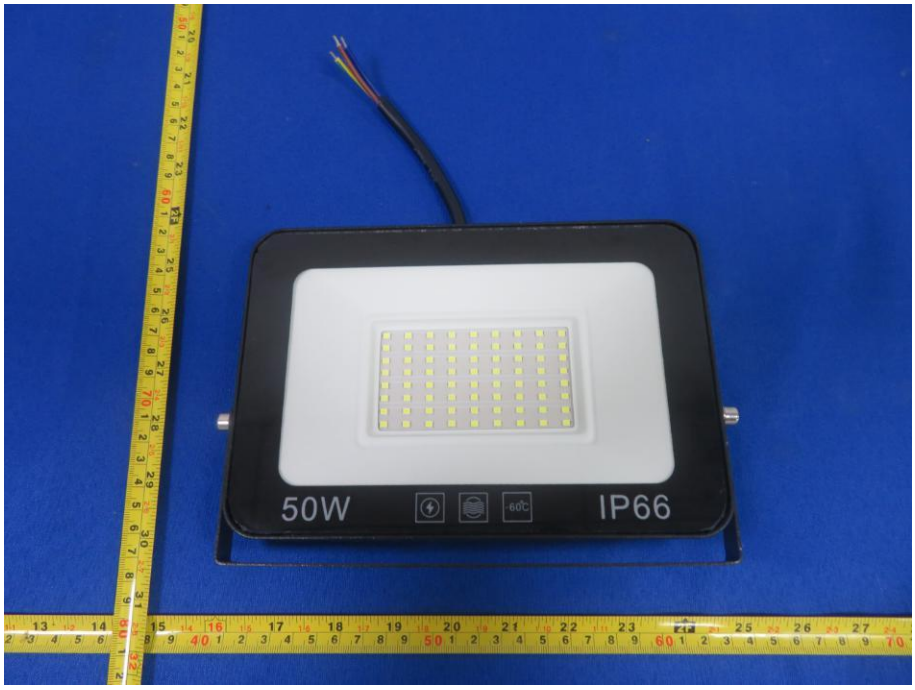



Fig.5

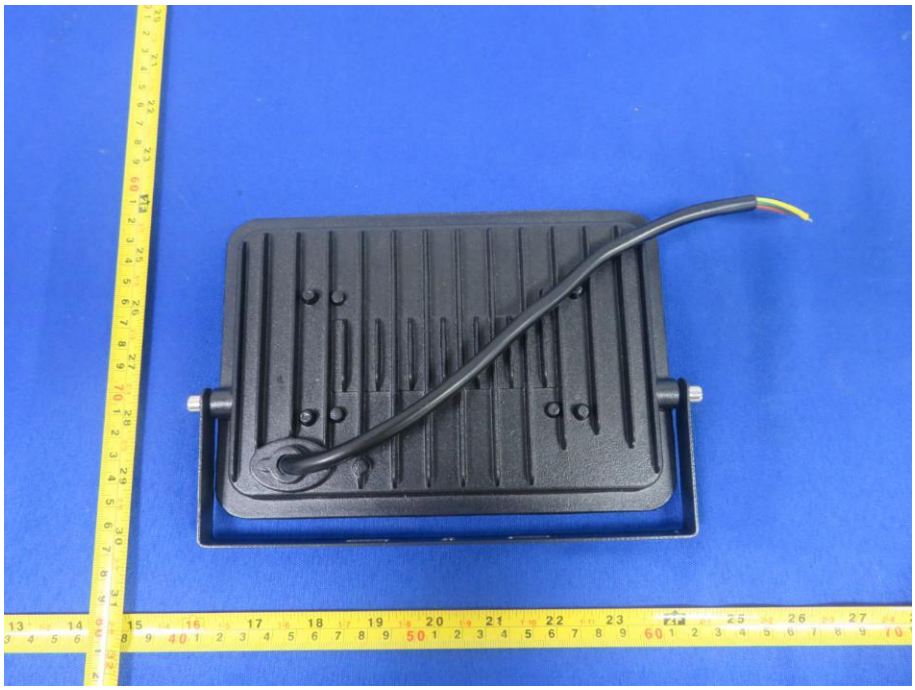


Fig.6


Fig.7

Fig.8

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