

**Applicant Name:** ZHONGSHAN WEIHUA LIGHTING TECHNOLOGY CO., LTD

**Applicant Address:** No.13 YOUNG YI 2RD HENGLAN TOWN, ZHONGSHAN CITY, GUANGDONG PROVINCE CHINA

**Test item:** SMART OUTDOOR WALL LIGHT

**Model / Type Reference:** 60000149, 0501-WT-TY, 60000150, 0415S-WD-TY, 60000151, 0288-WD-TY, 60000152, 2079-TY

**FCC ID:** 2A7H8-60000XXX

**Date of Issue:** 2025-01-06

**Testing Laboratory:** LCTECH Guangdong Testing Services Co., Ltd.  
2/F., Technology and Enterprise Development Center, Guangyuan Road, Xiaolan, Zhongshan, Guangdong, China

**Test Specification:** KDB 447498 D01 General RF Exposure Guidance v06

**Test Result:** Passed

**Compiled by:**

**Reviewed by:**

2025-01-06

Rex He

Rex He

2025-01-06

Tension Li

Tension Li

*Date*

*Name*

*Signature*

*Date*

*Name*

*Signature*

**Remark:**

N/A

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## RF Exposure Evaluation

### Limits

| Frequency range (MHz)                                | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density(mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|------------------------------------|--------------------------|
| (A)Limits for Occupational/Controlled Exposures      |                               |                               |                                    |                          |
| 0.3-3.0  | 614                           | 1.63                          | *(100)                             | 6                        |
| 3.0-30   | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )             | 6                        |
| 30-300   | 61.4                          | 0.163                         | 1.0                                | 6                        |
| 300-1500   |                               |                               | f/300                              | 6                        |
| 1500-100,000   |                               |                               | 5                                  | 6                        |
| (B)Limits for GeneralPopulation/UncontrolledExposure |                               |                               |                                    |                          |
| 0.3-1.34   | 614                           | 1.63                          | *(100)                             | 30                       |
| 1.34-30  | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )             | 30                       |
| 30-300   | 27.5                          | 0.073                         | 0.2                                | 30                       |
| 300-1500   |                               |                               | f/1500                             | 30                       |
| 1500-100,000   |                               |                               | 1.0                                | 30                       |

f = frequency in MHz

Friis transmission formula: $Pd = (Pout * G) / (4 * \pi * r^2)$

Where

**Pd** =power density in mW/cm<sup>2</sup>, **Pout**= output power to antenna in mW;

**G** = gain of antenna in linear scale, **Pi**=3.1416;

**R** = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

### Test Procedure

Software provided by client enabled the EUT to transmit and receive data b in

Bluetooth and wireless functions individually.

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## Test Result of RF Exposure Evaluation

### BLE mode

| Channel | Output power to antenna(dBm) | Output power to antenna(mW) | Power Density at R=20cm (mW/cm2) | Limit (mW/cm2) | Result |
|---------|------------------------------|-----------------------------|----------------------------------|----------------|--------|
| 2440MHz | 6.822                        | 4.811                       | 0.00212                          | 1.0            | PASS   |

### 802.11b

| Channel | Output power to antenna(dBm) | Output power to antenna(mW) | Power Density at R=20cm (mW/cm2) | Limit (mW/cm2) | Result |
|---------|------------------------------|-----------------------------|----------------------------------|----------------|--------|
| 2412MHz | 19.811                       | 95.741                      | 0.04209                          | 1.0            | PASS   |

The RF function of the product can only be used in one mode at a time, so there is no need for co-assessment.

Remark: antenna gain=2.21dBi

The max power density is less than MPE exempt limit, so it is compliance.