



■ Report No.: DDT-RE23040334-2E03

■ Issued Date: May 25, 2023

# RF EXPOSURE REPORT

## FOR

<b>Applicant</b>	:	HANGZHOU LIJIACHENG ELECTRIC CO.,LTD
<b>Address</b>	:	No. 35 Yangshan Road, Gaohong industrial Zone, Lin'an City, Hangzhou China.
<b>Equipment under Test</b>	:	LED down light
<b>Model No.</b>	:	LJC-US-SDLG3F-Y4C10.5W950-RGBCW12W-21V1, LJC-US-SDLG3F-Y6C13W950-RGBCW12W-21V1, LJC-US-SDLG3F-F4C10.5W950-RGBCW13W-21V1, LJC-US-SDLG3F-F6C13W950-RGBCW13W-21V1
<b>Trade Mark</b>	:	N/A
<b>FCC ID</b>	:	2AW8CGJJKT
<b>Manufacturer</b>	:	HANGZHOU LIJIACHENG ELECTRIC CO.,LTD
<b>Address</b>	:	No. 35 Yangshan Road, Gaohong industrial Zone, Lin'an City, Hangzhou China.

**Issued By: Dongguan Dongdian Testing Service Co., Ltd.**

**Add.:** No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park,

Dongguan City, Guangdong Province, China, 523808

**Tel.:** +86-0769-38826678, **E-mail:** ddt@dgddt.com, <http://www.dgddt.com>

# REPORT

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## Test Report Declare

<b>Applicant</b>	:	HANGZHOU LIJIACHENG ELECTRIC CO.,LTD
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<b>Trade Mark</b>	:	N/A
<b>Manufacturer</b>	:	HANGZHOU LIJIACHENG ELECTRIC CO.,LTD
<b>Address</b>	:	No. 35 Yangshan Road, Gaohong industrial Zone, Lin'an City, Hangzhou China.

**Standard Used:** KDB447498 D01 General RF Exposure Guidance v06

**We Declare:**

The equipment described above is assessed by Dongguan Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above.

The assessed results are contained in this report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

**After evaluation, our opinion is that the equipment In Accordance with above standard.**

<b>Report No:</b>	DDT-RE23040334-2E03		
<b>Date of Receipt:</b>	Apr. 07, 2023	<b>Date of Test:</b>	Apr. 07, 2023 ~ May 16, 2023

**Prepared By:**



**Tiger Mo /Engineer**

**Approved By:**



**Damon Hu/EMC Manager**

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

## Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	May 25, 2023	

## 1. General Information

### 1.1. Description of equipment

EUT Name	: LED down light
Model Number	: LJC-US-SDLG3F-Y4C10.5W950-RGBCW12W-21V1, LJC-US-SDLG3F-Y6C13W950-RGBCW12W-21V1, LJC-US-SDLG3F-F4C10.5W950-RGBCW13W-21V1, LJC-US-SDLG3F-F6C13W950-RGBCW13W-21V1
Difference of models	: LJC-US-SDLG3F-W#CWWWCXX-#####SSM-ZZV# Model difference: 1. LJC-US-SDLG3F:product name 2. Y: circular; F: square 3. 6C: 6-inch; 4C: 4-inch 4. 10.5W 13W: Product power 5. C can be 8 or 9 represents CRI. 6. 1st X can be A for CCT tunable or Blank for single CCT. 7. 2nd X can be 5, 4, 3, 2 or 1 for LED series gty. 8. 3rd and 4th X can be 27, 30, 35, 40, 50, 57 or 65 represents highest CCT. 9. 5th and 6th X can be 18, 20, 22 or 25 represents lowest CCT. 10. 1st S can be 1 for anti glare, or 2 for non-anti glare. 11. 2nd S can be any number represent junction box color. 12. V can be 1, 2, 3, 4, 5, 6 for lamp case color. 13. # can be any numbers represents the commercial code Above models are identical in schematic, only the name and structure are different for all the models, therefore the test performed on the model LJC-US-SDLG3F-Y6C13W950-RGBCW12W-21V1.
EUT function description	: Please reference user manual of this device
Power Supply	: AC 120V/60Hz
Radio Technology	: BLE: Bluetooth V5.0 2.4G WIFI: IEEE 802.11b/g/n
Operation frequency	: BLE: 2402 MHz - 2480 MHz 2.4G WIFI: IEEE 802.11b: 2412MHz-2462MHz IEEE 802.11g: 2412MHz-2462MHz IEEE 802.11n HT20: 2412MHz-2462MHz IEEE 802.11n HT40: 2422MHz-2452MHz
Modulation	: BLE: GFSK 2.4G WIFI: IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK, BPSK)
Transmitter rate	: BLE: 1 Mbps 2.4G WIFI: IEEE 802.11b: up to 11 Mbps IEEE 802.11g: up to 54 Mbps IEEE 802.11n HT20: up to 72.2 Mbps IEEE 802.11n HT40: up to 150 Mbps
Antenna Type	: FPC antenna, Maximum PK gain: 5.59 dBi
Sample Number	: S23040334-03 for conductive S23040334-04 for radiation

## 1.2. Assess laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: [ddt@dgddt.com](mailto:ddt@dgddt.com).

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

## 2. RF Exposure Evaluation

### 2.1. Requirement

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

#### Limits for General Population/Uncontrolled Exposure

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; \*Plane-wave equivalent power density

### 2.2. Calculation method

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } S(mW/cm^2) = \frac{E^2}{377}$$

**E** = Electric field (V/m)

**P** = Peak RF output power (mW)

**G** = EUT Antenna numeric gain (numeric)=

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2 m, as well as the gain of the used antenna, the RF power density can be obtained.

### 2.3. Estimation result

Mode	Output power (dBm)	Output power (mW)	tune up power (dBm)	Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW/cm <sup>2</sup> )	MPE Limit (mW/cm <sup>2</sup> )
BLE	8.43	6.97	9	5.59	3.62	0.005	1
2.4G WIFI	14.77	29.99	15	5.59	3.62	0.022	1

Note: The estimation distance is 20 cm

Conclusion: MPE evaluation required since transmitter power is below FCC threshold

**END OF REPORT**