

RF EXPOSURE EVALUATION REPORT

Application No.: GZCR2306000539LM
Applicant: Dong Guan Jia Sheng Lighting Technology Co., Ltd.
Address of Applicant: HUMEN TOWN SHUTIAN VILLAGE DONGGUAN GUANGDONG 523636 CHINA
Manufacturer: Dong Guan Jia Sheng Lighting Technology Co., Ltd.
Address of Manufacturer: HUMEN TOWN SHUTIAN VILLAGE DONGGUAN GUANGDONG 523636 CHINA
Equipment Under Test (EUT):
EUT Name: LED Lantern Speaker ROOMS
Model No.: SP0000049-02
Standard(s) : KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2023-06-02
Date of Evaluation: 2023-06-14 to 2023-06-14
Date of Issue: 2023-06-19

Evaluation Result:

Pass*

* In the configuration evaluated, the EUT complied with the standards specified above.



Ricky Liu
Manager



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| Revision Record | | | |
|-----------------|------------------|------------|----------|
| Version | Report No. | Date | Remark |
| 01 | GZCR230600053903 | 2023-06-19 | Original |
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|---------------------------------|--|--------------------------------------|--|
| Authorized for issue by: | | | |
| | | | |
| | | <hr/> Jim Li/Project Engineer | |
| | | | |
| | | <hr/> Vico Cui/Reviewer | |



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2 Evaluation Summary

| Item | Standard | Method | Requirement | Result |
|-------------|--|--|--|--------|
| RF Exposure | KDB447498 D01 General RF Exposure Guidance v06 | KDB447498 D01 General RF Exposure Guidance v06 | KDB447498 D01 General RF Exposure Guidance v06 | Pass |

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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4 General Information

4.1 Details of E.U.T.

| | |
|-----------------------------|--|
| Power supply: | Powered by built-in battery as below for normal working: Model: GEB 112744 DC 3.7 V, 1700mAh, 6.29Wh DC 5 V for charging. |
| Cable(s): | USB Type-C cable, 1.0m |
| Operation Frequency: | 2402MHz to 2480MHz |
| Modulation Type: | GFSK, pi/4DQPSK, 8DPSK |
| Number of Channels: | 79 |
| Channel Spacing: | 1MHz |
| Spectrum Spread Technology: | Frequency Hopping Spread Spectrum(FHSS) |
| Antenna Type: | PCB Antenna |
| Antenna Gain: | -0.58 dBi |
| Antenna Number: | 1 |

4.2 Evaluating Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,
Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.



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4.3 Facility

The facility is recognized, certified, or accredited by the following organizations:

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.4 Deviation from Standards

None

4.5 Abnormalities from Standard Conditions

None



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5 Technical Requirements Specification

5.1 RF Exposure Evaluation

5.1.1 Limit & Test Method

KDB447498D01 General RF Exposure Guidance v06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \cdot \sqrt{f(\text{GHz})} \right] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

5.1.2 Conclusion

Normal use condition for Distance < 5 mm
between antenna and body:

For Bluetooth BLE

| | | |
|--|---|------------------|
| The Maximum Conducted Peak Output Power is | -1.91 dBm in channel | 2.480 GHz; |
| -1.91 dBm logarithmic terms convert to numeric result is nearly | 0.644 mW | |
| $\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \cdot \sqrt{f(\text{GHz})} \right]$ | | |
| General RF Exposure = | $0.644 \text{ mW} / 5 \text{ mm} \times \sqrt{2.480 \text{ GHz}}$ | = 0.203 ; |
| | SAR requirement: | S = 3.0 ; |
| $0.203 < 3.0$. the SAR report is not required. | | |

Note: Refer to report No. GZCR230600053902 for EUT test Max Conducted Peak Output Power value.



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6 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for GZCR2306000539LM

- End of the Report -



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