

RF Exposure Evaluation Report

Product : BLUETOOTH CONTROLLER
Trade mark : N/A
Model/Type reference : BL-GV-2025
Serial Number : N/A
Report Number : EED32R80427502
FCC ID : 2ACO2-GV-TX02
Date of Issue : May 14, 2025
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
47 CFR Part 2.1093
KDB 447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

Golden Vessel Electronic & Lighting, Inc
Industrial District, ZhongHan Town ChaoHu City, AnHui Province, China

Prepared by:

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May 14, 2025



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1 Version

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3 General Information

3.1 Client Information

Applicant:	Golden Vessel Electronic & Lighting, Inc
Address of Applicant:	Industrial District, ZhongHan Town ChaoHu City, AnHui Province, China
Manufacturer 1:	Golden Vessel Electronic & Lighting, Inc
Address of Manufacturer 1:	Industrial District, ZhongHan Town ChaoHu City, AnHui Province, China
Manufacturer 2:	WINKSTAR ELECTRONIC AND LIGHTING CO., LTD
Address of Manufacturer 2:	Kilometer number 69, National Road No. 2, Prey Prom Village, Roka Knong Commune, Daun keo City, Takeo Province, Cambodia
Factory 1:	Golden Vessel Electronic & Lighting, Inc
Address of Factory 1:	Industrial District, ZhongHan Town ChaoHu City, AnHui Province, China
Factory 2:	WINKSTAR ELECTRONIC AND LIGHTING CO., LTD
Address of Factory 2:	Kilometer number 69, National Road No. 2, Prey Prom Village, Roka Knong Commune, Daun keo City, Takeo Province, Cambodia

3.2 General Description of EUT

Product Name:	BLUETOOTH CONTROLLER
Model No.:	BL-GV-2025
Test Model No.:	BL-GV-2025
Trade mark:	N/A

3.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	GFSK	
Test Power Grade:	Default	
Test Software of EUT:	bt_tool_v1.1.4	
Antenna Type:	PCB Antenna	
Antenna Gain:	-2.44dBi	
Power Supply:	Adapter:	Model: JL-DC240V0375-D Input: 120V, 60Hz Output: 24V/0.375A
Sample Received Date:	Apr. 21, 2025	
Sample tested Date:	Apr. 21, 2025 to Apr. 23, 2025	

3.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation

For Stand alone:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
@2.4GHz	20	-3.1	-2.44	-5.25	0.2985	3060	0.0001	Pass

Note:

- ① EIRP=conducted power+antenna gain;
- ② $ERP = EIRP - 2.15$;
- ③ $EIRP(dBm) = \text{Field strength of the fundamental signal}(dBuV/m@3m) - 95.23$;
- ④ $ERP(mW) = 10^{(ERP(dBm)/10)}$;
- ⑤ The estimation distance is 20cm;
- ⑥ The test data please refer to the report of EED32R80427501 and only the worst case data was recorded in the report.

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule stated in ILAC-G8:09/2019/CNAS-GL015:2022;
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*** End of Report ***