

FCC RF Exposure

Applicant : FoShan Wisdom Light Co.,Ltd
Address : Block 2, No. 10, Gaohai Avenue, Gaohai Industrial Zone, Danzao Town, Nanhai District, Foshan City, 528234, Guangdong province, China
Product Name : LED LINEAR LIGHT
Brand Mark : Wisdom light
Model no. : WL-2LSUD8FT100WEDHV
Series model : WL-2LSUD2FT25WEDHV
WL-2LSUD4FT50WEDHV
FCC ID : 2BRHR-2LSUD
Report Number : BLA-EMC-202507-A10202
Date of Receipt : Aug. 08, 2025
Date of Test : Aug. 08, 2025 to Dec. 02, 2025
47 CFR Part 15, Part1.1307
Test Standard : 47 CFR Part 15, Part2.1093
KDB447498D04 General RF Exposure Guidance v01
Test Result : Pass

Compiled by: Mark Chen

Review by: Xavier



Approved by: [Signature]

Issued Date: Jan. 12, 2026

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Revise Record

Version No.	Date	Description
01	Jan. 12, 2026	Original

1 General information

1.1 General information

Applicant	FoShan Wisdom Light Co.,ltd
Address	Block 2, No. 10, Gaohai Avenue, Gaohai Industrial Zone, Danzao Town, Nanhai District, Foshan City, 528234, Guangdong province, China
Manufacturer	FoShan Wisdom Light Co.,ltd
Address	Block 2, No. 10, Gaohai Avenue, Gaohai Industrial Zone, Danzao Town, Nanhai District, Foshan City, 528234, Guangdong province, China
Factory	FoShan Wisdom Light Co.,ltd
Address	Block 2, No. 10, Gaohai Avenue, Gaohai Industrial Zone, Danzao Town, Nanhai District, Foshan City, 528234, Guangdong province, China

1.2 General description of EUT

Product name	LED LINEAR LIGHT
Model no.	WL-2LSUD8FT100WEDHV
Series Model No.	WL-2LSUD2FT25WEDHV WL-2LSUD4FT50WEDHV
Differences of Series model	Above model, two types of power supplier, 25W and 50W, have the same Circuit diagram, PCB-layout and all electrical construction, only the appearance size, power and the number of Bluetooth modules and LED quantity are different. Details is below: WL-2LSUD8FT100WEDHV with 2pcs 50W bluetooth power supplier, 1 bluetooth module each. Both of WL-2LSUD2FT25WEDHV and WL-2LSUD4FT50WEDHV have same working principle and the number of modules. The only difference lies in the parameters of the electronic components inside the power supply. 1pc bluetooth power supplier and 1pc bluetooth module each.
Operation Frequency	2402MHz-2480MHz
Modulation Type	GFSK
Rate data	1Mbps, 2Mbps
Channel Spacing	2MHz
Number of Channels	40
Antenna Type	Stick antenna
Antenna Gain	0.76dBi(Provided by customer)
Power supply	Input: 120-277VAC 50/60Hz

Test Voltage	AC 120V
Hardware Version	N/A
Software Version	N/A
<i>Note: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.</i>	

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2 RF Exposure Compliance Requirement

2.1 Standard Requirement

According to 447498 D04 Interim General RF Exposure Guidance v01

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.2 Limits

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B. 2})$$

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).

Example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

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

2.3 Result

$$\text{EIRP} = \text{pt} \times \text{gt} = (\text{E} \times \text{d})^{2/30}$$

Where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m

d = measurement distance in meters (m)

$$\text{Spot} = (\text{E} \times \text{d})^{2/30} \times \text{gt}$$

Separation Distance: 20 (cm)

BLE antenna gain = 0.76dBi

Module1(worse case)

BLE 1M: Maximum Conducted Output Power: 3.219dBm @2480MHz

$$\text{ERP} = 3.219 + 0.76 - 2.15 = 1.829\text{dBm} = 1.524\text{mW} < 3060\text{mW}$$

it's deemed to fulfil the RF exposure requirement.

----END OF REPORT----

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