

FCC RF Exposure

Applicant : Maxlite Inc.
Address : 12 York Avenue, West Caldwell, New Jersey 07006 United States
Product Name : LED luminaire
Brand Mark : Maxlite
Model : RCF10N35TWMS
Series model : RCF4N10TWMS, RCF4N10TWMSTA, RCF6N20TWMS, RCF6N20TWMSTA, RCF8N28TWMS, RCF8N28TWMSTA, RCF10N35TWMSTA
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Report Number : BLA-EMC-202511-A0602
Date of Receipt : Nov. 05, 2025
Date of Test : Nov. 05, 2025 to Nov. 19, 2025
Test Standard : 47 CFR Part 15, Part1.1307
KDB447498D04 General RF Exposure Guidance v01
Test Result : Pass

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Approved by: Blue Zheng

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Revise Record

Version No.	Date	Description
01	Dec. 11, 2025	Original

BlueAsia

1 General information

1.1 General information

Applicant	Maxlite Inc.
Address	12 York Avenue, West Caldwell, New Jersey 07006 United States
Manufacturer	Maxlite Inc.
Address	12 York Avenue, West Caldwell, New Jersey 07006 United States

1.2 General description of EUT

Product name	LED luminaire
Model no.	RCF10N35TWMS
Series model	RCF4N10TWMS, RCF4N10TWMSTA, RCF6N20TWMS, RCF6N20TWMSTA, RCF8N28TWMS, RCF8N28TWMSTA, RCF10N35TWMSTA
Differences of Series model	Above model, They use the same Bluetooth module, and the driver circuit design schematic is also the same, only the appearance size and model name are different.
Operation Frequency	2402MHz-2480MHz
Modulation Type	GFSK
Rate data	1Mbps, 2Mbps
Channel Spacing	2MHz
Number of Channels	40
Antenna Type	Monopole antenna
Antenna Gain	0.42dBi(Provided by customer)
Power supply	Input rating: 120-277V, 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>	

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 = 0.5cm

For BLE 1M(Worst):

Max Output power = **-0.769dBm @ 2402MHz**

$$\text{EIRP} = -0.769\text{dBm} + 0.42\text{dBi} = -0.349\text{dBm}$$

$$\text{So, ERP} = -0.349 - 2.15 = -2.499\text{dBm} = 0.562\text{mW} < 3060\text{ mW}$$

Comply with RF exposure exemption limit.

----END OF REPORT----

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