

FCC RF Exposure

Applicant : Green Way Lighting llc
Address : 10832 Williamson Ln, Cockeysville, Maryland, United States
Product Name : Retrofit Troffer
Brand Mark : Green Way Lighting
Model no. : GW-RFKT24-35WS-CCT-BLE-BS
Series model : GW-RFKT22-30WS-CCT-BLE-BS
FCC ID : 2BOXR-RFK
Report Number : BLA-EMC-202601-A11002
Date of Receipt : Dec. 22, 2025
Date of Test : Dec. 22, 2025 to Dec. 29, 2025
Test Standard : 47 CFR Part 15, Part1.1307
47 CFR Part 15, Part2.1091
KDB447498D04 General RF Exposure Guidance v01
Test Result : Pass

Compiled by: Mark Chen Review by: Xavier



BlueAsia of Technical Services(Shenzhen) Co.,Ltd.

Address: Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District,
Shenzhen, Guangdong Province, China



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Revise Record

Version No.	Date	Description
01	Feb. 05, 2026	Original

BlueAsia

1 General information

1.1 General information

Applicant	Green Way Lighting llc
Address	10832 Williamson Ln, Cockeysville, Maryland, United States
Manufacturer	Green Way Lighting llc
Address	10832 Williamson Ln, Cockeysville, Maryland, United States
Factory	Wuxi Seastar Lighting Co.,Ltd
Address	West of the 11th Road, north of the 13th Road, south of the planned river, Hongshan Street, Xinwu District, Wuxi City, Jiangsu, China
Factory	Sea Star Smart Tech Sdn Bhd
Address	No. 2, Jalan Mega 1/10 Taman Perindustrian Nusa Cemerlang Iskandar

1.2 General description of EUT

Product name	Retrofit Troffer
Model no.	GW-RFKT24-35WS-CCT-BLE-BS
Series Model No.	GW-RFKT22-30WS-CCT-BLE-BS
Differences of Series model	The above models are identical in PCB layout, internal structure and components .only the appearance size, power 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	FPC antenna
Antenna Gain	8.41dBi(Provided by customer)
Power supply	AC 120-277V, 50/60Hz
Test Voltage	AC 120V/60Hz
Hardware Version	N/A
Software Version	N/A

Note: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

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)

Antenna gain = 8.41dBi

BLE 1M (Worse case):

Maximum Conducted Output Power: 1.198dBm @2442MHz

$$\text{ERP} = 1.198 + 8.41 - 2.15 = 7.458 \text{dBm} = 5.569 \text{mW} < 3060 \text{mW}$$

it's deemed to fulfil the RF exposure requirement.

----END OF REPORT----

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