Website: www.cblueasia.com
Tel: +86-755-23059481
Email: marketing@cblueasia.com

FCC RF Exposure

Applicant	:	Shenzhen LiteTrace TechnologiesCo., Ltd
Address	:	305 Suite C, 3151 Shahe West Street Jianxing Technology Plaza, Nanshan Shenzhen, China
Product Name	:	LED Controller
Brand Mark	:	Keilton
Model no.	:	EFS106-AUX.C1
Series model	:	EFS106ZYYYYY, "YYYYY" - can be blank or any alphanumeric or decimal point for commercial purposes.Z- can be -Z10, -AUX, or -3PIN, -BH4, -type C represents base of the sensor.
FCC ID	:	2A26YEFS106
Report Number	:	BLA-EMC-202506-A1102
Date of Receipt	:	Jun. 13, 2025
Date of Test	:	Jun. 13, 2025 to Jun. 18, 2025
Test Standard	:	47 CFR Part 15, Part1.1307 47 CFR Part 15, Part2.1093 KDB447498D04 General RF Exposure Guidance v01
Test Result	:	Pass

Compiled by: Mark Chen **Review by:** Xavier **Approved by:** Zhue Zheng

Issued Date: Jun. 18, 2025

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

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

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

The test report is effective only with both signature and specialized stamp and The result(s) shown in this report refer only to the sample(s) tested. Without written approval of BlueAsia, this report can't be reproduced except in full. The results described in this report do not represent the quality or characteristics of the sampled batch, nor do they represent any similar or identical products that are not explicitly stated.

Table of Contents

BlueAsia

Revise Record

Version No.	Date	Description
01	Jun. 18, 2025	Original

BlueAsia

1 General information

1.1 General information

Applicant	Shenzhen LiteTrace TechnologiesCo., Ltd
Address	305 Suite C, 3151 Shahe West Street Jianxing Technology Plaza, Nanshan Shenzhen, China
Manufacturer	Shenzhen LiteTrace TechnologiesCo., Ltd
Address	305 Suite C, 3151 Shahe West Street Jianxing Technology Plaza, Nanshan Shenzhen, China
Factory	Shenzhen LiteTrace TechnologiesCo., Ltd
Address	305 Suite C, 3151 Shahe West Street Jianxing Technology Plaza, Nanshan Shenzhen, China

1.2 General description of EUT

Product name	LED Controller
Model no.	EFS106-AUX.C1
Series model	EFS106ZYYYYY, "YYYYY" - can be blank or any alphanumeric or decimal point for commercial purposes.Z- can be -Z10, -AUX, or -3PIN, -BH4, -type C represents base of the sensor.
Differences of Series model	Their circuit design, layout, components used and internal wiring, appearance are exactly the same, and different colors for the shells, different bases.
Operation Frequency	2402MHz-2480MHz
Modulation Type	GFSK
Rate data	1Mbps, 2Mbps
Channel Spacing	2MHz
Number of Channels	40
Antenna Type	PCB antenna
Antenna Gain	-1.37dBi (Provided by customer)
Power supply	DC 12V
Hardware Version	V1.0
Software Version	V1.0
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

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

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

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

2.3 Result

EIRP = pt x gt = (E X 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)
Spot = (EXd)2/30 x gt
Separation Distance: 20 (cm)
Antenna gain = -1.37dBi
BLE 1M worse case:
Max Output power = -0.407dBm @2402MHz
ERP= -0.407dBm-1.37-2.15=-3.927dBm
because conducted Max Output power >ERP
So, conducted Max Output power=-0.407dBm=0.911mW<3060mW
Comply with RF exposure exemption limit.

BlueAsia

----END OF REPORT----

The test report is effective only with both signature and specialized stamp, the result(s) shown in this report refer only to the sample(s) tested. Without written approval of BlueAsia, this report can't be reproduced except in full.