

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. : IFS108.B1

IFSX08ZYYYYY, "YYYYY" - can be blank or any alphanumeric or

Series model : decimal point for commercial purposes.Z- can be -AUJ, -AUX, -N,

or blank represents base of the sensor.

FCC ID : 2A26YIFS108

Report Number : BLA-EMC-202506-A1302

Date of Receipt : Jun. 13, 2025

Date of Test : Jun. 13, 2025 to Jun. 18, 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 then Review by: Lavier

Approved by:

Issued Date: Jun. 18, 2025

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

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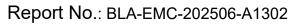






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Revise Record

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



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.	IFS108.B1				
Series model	IFSX08ZYYYYY, "YYYYYY" - can be blank or any alphanumeric or decimal point for commercial purposes.Z- can be -AUJ, -AUX, -N, or blank 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.					

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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

$$P_{\text{th}} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \le 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \le 40 \text{ cm} \end{cases}$$
(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_{20cm} is per Formula (B.1).

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

Table B.2—Example Power Thresholds (mW)

					Dis	stance	(mm)				
		5	10	15	20	25	30	35	40	45	50
Frequency (MHz)	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

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



2.3 Result

EIRP = pt x gt = $(E \times d)2/30$

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 = $(EXd)2/30 \times gt$

Separation Distance: 20 (cm)

Antenna gain = -1.37dBi

BLE 2M worse case:

Max Output power = -0.083dBm @2402MHz

ERP= -0.083dBm-1.37-2.15=-3.603dBm

because conducted Max Output power >ERP

So, conducted Max Output power=-0.083dBm=0.981mW<3060mW

Comply with RF exposure exemption limit.

----END OF REPORT----

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