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# FCC RF Exposure

| | | |
|---|---|---|
| **Applicant** | : | Felion Technologies Company Limited |
| **Address** | : | Room 304 3F Fuxing Building No.6 Binglang Road Fubao Community Futian District Shenzhen |
| **Product Name** | : | ColorFlux Light Strip |
| **Brand Mark** | : | ISOOCO, VOCOLINC |
| **Model no.** | : | LS3 |
| **Series model** | : | LS2201, LS2202 |
| **FCC ID** | : | 2AXT8-LS2201 |
| **Report Number** | : | BLA-EMC-202411-A3602 |
| **Date of Receipt** | : | 2024.11.13 |
| **Date of Test** | : | 2024.11.13 to 2024.12.03 |
| **Test Standard** | : | 47 CFR Part 15, Part1.1307<br>47 CFR Part 15, Part2.1093<br>KDB447498D04 General RF Exposure Guidance v01 |
| **Test Result** | : | Pass |

**Compiled by:** Mark Chen **Review by:** Sweets **Approved by:** Blue Zheng

**Issued Date:** 2024.12.06

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

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# Revise Record

| Version No. | Date | Description |
|---|---|---|
| 01 | 2024.12.06 | Original |
| | | |
| | | |
| | | |

# 1 General information

## 1.1 General information

| | |
|---|---|
| Applicant | Felion Technologies Company Limited |
| Address | Room 304 3F Fuxing Building No.6 Binglang Road Fubao Community Futian District Shenzhen |
| Manufacturer | Felion Technologies Company Limited |
| Address | Room 304 3F Fuxing Building No.6 Binglang Road Fubao Community Futian District Shenzhen |
| Factory | N/A |
| Address | N/A |

## 1.2 General description of EUT

| | |
|---|---|
| Product name | ColorFlux Light Strip |
| Model no. | LS3 |
| Series model | LS2201, LS2202 |
| Desc of series model | The above models are identical in PCB layout, internal structure and components, only model no, and appearance is different. |
| Operation Frequency: | 2402MHz-2480MHz |
| Modulation Type: | GFSK |
| Channel Spacing: | 2MHz |
| Number of Channels: | 40 |
| Antenna Type: | PCB Antenna |
| Antenna Gain: | 0dBi(Provided by the customer) |
| Test Voltage: | AC 120V |

# 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

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

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 |

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

## 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

Ant gain = 0 dBi
BLE:
Max Output power =-4.101dBm @ 2402MHz
ERP = -4.101dBm+0dBi-2.15=-6.251dBm=0.237mW< 3060 mW
Comply with RF exposure exemption limit.



**----END OF REPORT----**