

RF Exposure Report (FCC)

Report No.: WIR125040-FCC-RF Exposure

Test Model: Lumin Smart Panel

Test Date: March 24, 2023

Issued Date: May 31, 2023

Applicant: Coulomb, Inc.
501 Locust Ave.

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Issued By: Eurofins Electrical and Electronic Testing NA, Inc.

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1. Certificate of Conformity

Product: Lumin Smart Panel

FCC ID: 2AY52-LSP12WE

Brand: Lumin

Test Model: Lumin Smart Panel

Applicant: Coulomb, Inc

Test Date: March 24, 2023

Standard: 47 CFR FCC Part 2.1093



Donald Salguero
Wireless Laboratory Engineer

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements.



Michael Griffiths
Manager, Wireless Laboratory

Report Status Sheet

Revision	Report Date	Reason for Revision
Ø	May 31, 2023	Initial Issue.

2. RF Exposure

Requirement:

47 CFR 2.1091(c)(1)

Evaluation of compliance with the exposure limits in § 1.1310 of this chapter, and preparation of an EA if the limits are exceeded, is necessary for mobile devices with single RF sources having either more than an available maximum time-averaged power of 1 mW or more than the ERP listed in Table 1 to § 1.1307(b)(3)(i)(C), whichever is greater. For mobile devices not exempt by § 1.1307(b)(3)(i)(C) at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 of this chapter is necessary if the ERP of the device is greater than ERP_{20cm} in the formula below. If the ERP of a single RF source at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP) in comparison with the following formula only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

47 CFR 2.1091(c)(2)

For multiple mobile or portable RF sources within a device operating in the same time averaging period, routine environmental evaluation is required if the formula in § 1.1307(b)(3)(ii)(B) of this chapter is applied to determine the exemption ratio and the result is greater than 1.

Evaluation:

$$S_{\text{limit}} = 1 \text{ mW/cm}^2$$

$$S = \frac{P * G}{4 * \pi * r^2}$$

Where

S = power density in mW/cm²

P = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

FCC									
Frequency (MHz)	Con. Pwr. (dBm)	Con. Pwr. (mW)	Ant. Gain (dBi)	Ant. Gain numeric	Pwr. Density (mW/cm ²)	Limit (mW/cm ²)	Margin	Distance (cm)	Result
2437	19.03	79.983	2	1.585	0.02522	1	0.97478	20	Pass

Table 1. FCC MPE

EUT complies to RF exposure at 20cm