TEST REPORT

Report No.:	BCTC2405436251-2E
Applicant:	Lumos Labs International Pte Ltd
Product Name:	Lumos Quad Charging Mat
Test Model:	LAXBL-NM
Tested Date:	2024-05-30 to 2024-06-05
Issued Date:	2024-06-13

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2A7ZK-LAXBLNM

Product Name:	Lumos Quad Charging Mat
Trademark:	N/A
Model/Type Reference:	LAXBL-NM
Prepared For:	Lumos Labs International Pte Ltd
Address:	11 Collyer Quay, #17-00, The Arcade, Singapore 049317, Singapore
Manufacturer:	Lumos Labs International Pte Ltd
Address:	11 Collyer Quay, #17-00, The Arcade, Singapore 049317, Singapore
Prepared By:	Shenzhen BCTC Testing Co., Ltd.
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	2024-05-30
Sample Tested Date:	2024-05-30 to 2024-06-05
Issue Date:	2024-06-13
Report No.:	BCTC2405436251-2E
Test Standards:	FCC CFR 47 part1, 1.1307(b), 1.1310
Test Results:	PASS

Tested by:

Shanshan. Zhang

Shanshan. Zhang / Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp.This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full.The tested sample(s) and the sample information are provided by the client.

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(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2405436251-2E	2024-06-13	Original	Valid

2. Product Information

2.1 Product Information

Model/Type Reference: LAXBL-NM
Model Differences: N/A
Hardware Version: N/A
Software Version: N/A
Operation Frequency: 111kHz-205kHz
Type of Modulation: ASK
Antenna installation: loop coil antenna
Ratings: Input: 9V/1.6A
Output: 2.5W*4(10W Max)

2.2 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Lumos Quad Charging Mat Charger	N/A	LAXBL-NM	N/A	EUT
E-2	ADAPTER	Hoco.	N18	N/A	Auxiliary
E-3	Dummy load	N/A	DL01	N/A	Auxiliary

Notes:
1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

2.3 Test Mode

Test Mode 1	Full Load(Coil 1+Coil 2+Coil 3+Coil 4)
Test Mode 2	Half Load(Coil 1+Coil 2+Coil 3+Coil 4)
Test Mode 3	Null Load(Coil 1+Coil 2+Coil 3+Coil 4)
Test Mode 4	Full Load(Coil 1)
Test Mode 5	Half Load(Coil 1)
Test Mode 6	Null Load(Coil 1)
Test Mode 7	Full Load(Coil 2)
Test Mode 8	Half Load(Coil 2)
Test Mode 9	Null Load(Coil 2)
Test Mode 10	Full Load(Coil 3)
Test Mode 11	Half Load(Coil 3)
Test Mode 12	Null Load(Coil 3)
Test Mode 13	Full Load(Coil 4)
Test Mode 14	Half Load(Coil 4)
Test Mode 15	Null Load(Coil 4)

Note:
All test mode were tested and passed, only shows the worst case mode which were recorded in this report.

3. Test Facility And Test Instrument Used

3.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.
FCC Test Firm Registration Number: 712850
A2LA certificate registration number is: CN1212
ISED Registered No.: 23583
ISED CAB identifier: CN0017

3.2 Test Instrument Used

EMF Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Electromagnet -ic radiation tester	Wavecontrol	SMP160	19SN0980	May 25, 2024	May 24, 2025
Electromagnet -ic field probe	Wavecontrol	WP400-3	20WP120082	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\

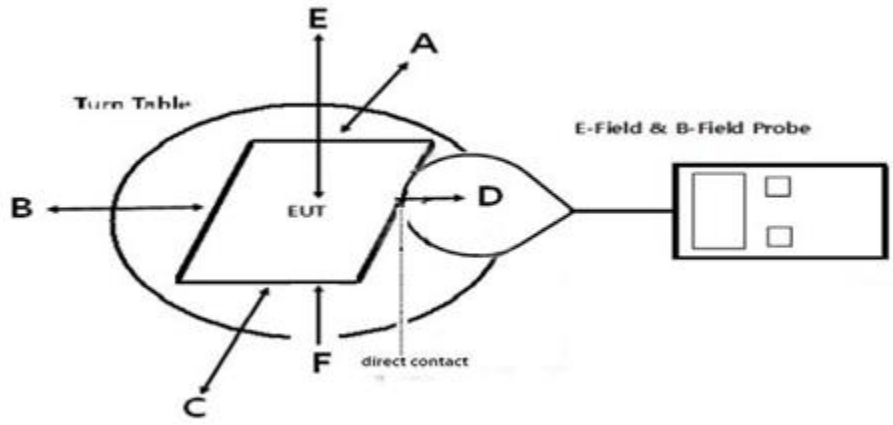
4. Method Of Measurement

4.1 Applicable Standard

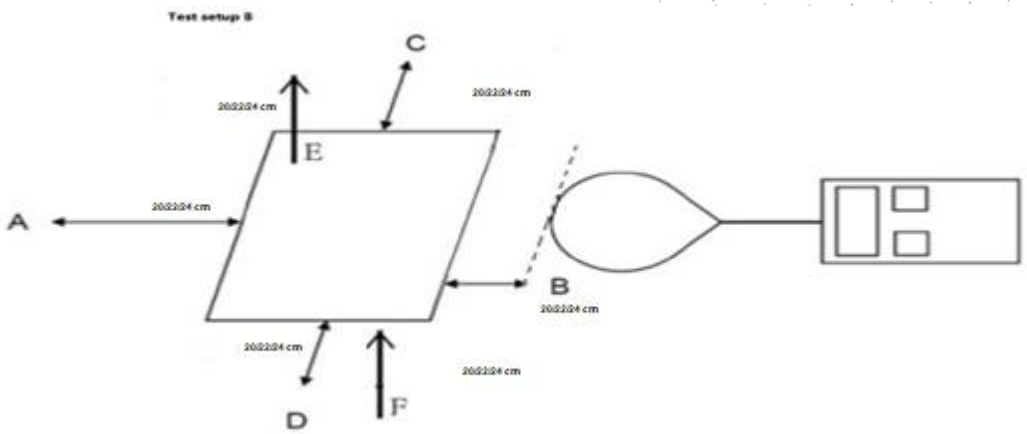
According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. According to §1.1310 and §2.1091 RF exposure is calculated. According KDB680106 D01v04: RF Exposure Wireless Charging Apps v04.

4.2 Block Diagram Of Test Setup

A:



B:



4.3 Limit

Limits for Occupational / Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|²,|H|² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

Limits for General Population / Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm²)	Averaging Time |E|²,|H|² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180 / f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1	30

4.4 Test procedure

a)The RF exposure test was performed in anechoic chamber.
b)The measurement probe was placed at 0 cm surrounding the device for test setup A; and the measurement Probe was placed at 20/22/24 cm for the test setup B.
c)The highest emission level was recorded and compared with limit as soon as measurement of each
d)The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
d)The EUT was measured according to the dictates of KDB680106 D01v04
f)Remark:The EUT's test position A, B, C, D , E and F is valid for the E and H field measurements.

4.5 Equipment Approval Considerations

The EUT does comply with item 5(b) of KDB680106 D01v04

1) Power transfer frequency is less than 1MHz
Yes, the device operate in the frequency range from 111-205kHz

2) Output power from each primary coil is less than or equal to 15 watts.
Yes, the maximum output power of the primary coil is 10W.

3) A client device providing the maximum permitted load is placed in physical contact with the transmitter.
Yes, client device is placed directly in contact with the transmitter.

4) Only § 2.1091-Mobile exposure conditions apply
Yes, the EUT is Mobile condition assessment.

5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1.
Yes, Conform to

6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time.
Yes, confirm.

4.6 E and H field Strength

We measured the H-Field Strength of 20cm, 22cm and 24cm, and recorded the test data of the worst 20cm.

Mobile: Test Mode 1 (the worst mode)

H-Field Strength at 20 cm surrounding the EUT and 20cm above the top surface of the EUT

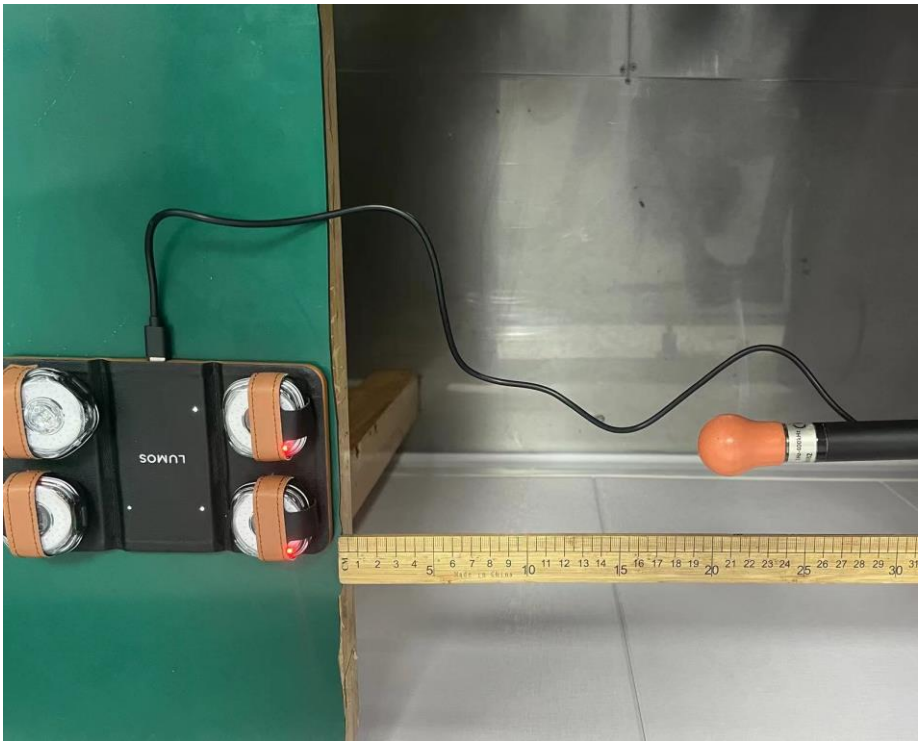
Frequency Range (MHz)	Test Position A(uT)	Test Position B(uT)	Test Position C(uT)	Test Position D(uT)	Test Position E(uT)	Test Position Top(uT)
0.111-0.205	0.0263	0.0330	0.0464	0.0239	0.0367	0.0362

Frequency Range (MHz)	Test Position A(A/m)	Test Position B(A/m)	Test Position C(A/m)	Test Position D(A/m)	Test Position E(A/m)	Test Position Top(A/m)	50% Limits Test (A/m)	Limits Test (A/m)
0.111-0.205	0.0210	0.0264	0.0371	0.0191	0.0294	0.0290	0.815	1.63

Note:A/m=uT÷1.25

5. Photographs Of Test Set-Up

Test Mode 1-3



STATEMENT

1. The equipment lists are traceable to the national reference standards.

2. The test report can not be partially copied unless prior written approval is issued from our lab.

3. The test report is invalid without the "special seal for inspection and testing".

4. The test report is invalid without the signature of the approver.

5. The test process and test result is only related to the Unit Under Test.

6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.

7. The quality system of our laboratory is in accordance with ISO/IEC17025.

8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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