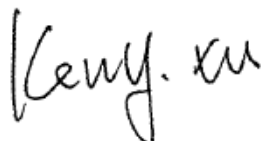


SAR Evaluation Report

Application No.: SZCR2105020925ET(SGS SZ No.:T52110260042EM)
Applicant: Lucky Group (H.K.) Limited
Address of Applicant: Building B, Lucky Industrial Park, Hongjin Road, Hongmei Town, Dongguan, China
Manufacturer: Shenzhen Eliteduce Technology CO., Ltd
Address of Manufacturer: Floor 3-6, XinLong Science Park, XiaWeiShui Industrial SongGang BaoAn District, Shenzhen, Guangdong, China.
Supplier: Lucky Group (H.K.) Limited
Importer: Dave & Buster's
Buyer: D&B
Equipment Under Test (EUT):
EUT Name: LED Light, Speaker & Charger
Model No.: 18801 ♣
 ♣ Please refer to section 4.1 of this report which indicates which model was actually tested and which were electrically identical.
P.O. / Ref. No.: LBC10061, LBD10125
Request Age Grading: 3+
Country of Origin: China
Country of Destination: USA
FCC ID: 2ACO3-18801
Standards: 47 CFR Part 1.1307
 47 CFR Part 2.1091
 KDB447498D01 General RF Exposure Guidance v06
Date of Receipt: 2021-05-08
Date of Test: 2021-05-21 to 2021-06-09
Date of Issue: 2021-06-11

Test Result :	PASS*
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* In the configuration tested, the EUT complied with the standards specified above.



Keny Xu
 EMC Laboratory Manager



2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2021-06-11		Original

Authorized for issue by:			
		<i>Powell Bao</i>	
		Powell Bao/Project Engineer	
		<i>Eric Fu</i>	
		Eric Fu/Reviewer	





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SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Testing Services Laboratory

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4 General Information

4.1 General Description of EUT

EUT Name	LED Light, Speaker & Charger
Power supply:	Powered by adapter with 5V/3A
Cable(s):	USB Type-A cable:115cm unshielded without core
Operation Frequency:	2402MHz to 2480MHz
Modulation Type:	GFSK, pi/4DQPSK
Number of Channels:	79
Channel Spacing:	1MHz
Spectrum Spread Technology:	Frequency Hopping Spread Spectrum(FHSS)
Antenna Type:	PCB Antenna
Antenna Gain:	-0.68dBi

Declaration of EUT Family Grouping:

Model No.: 18801

There are four samples. Only the white sample was tested. According to the declaration from the applicant, the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on colour and appearance.



4.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Address 1: No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Address 2: Room 105, Building A, Xinlong Technology Industrial Park, No. 50 Fengtang Road, Xintian Community, Fuyong Street, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

4.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.4 Deviation from Standards

None.

4.5 Abnormalities from Standard Conditions

None.

4.6 Other Information Requested by the Customer

None.



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5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.



5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

Antenna Gain: -0.68dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 0.855 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
2480	4.42	2.77	0.0005	1.0	PASS

Note: Refer to report No. SZCR210502092502 for EUT test Max Conducted Peak Output Power value. The distance r (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement.

Calculation formula of ratio:

Ratio= Result/Limit

For Bluetooth and WPC transmit simultaneously:

Bluetooth+WPC=0.0005/1+0.2326/1.63=0.1435<1

So the SAR report is not required.

- End of the Report -

