

Dongguan City Tianhua Photoelectric Technology Co., Ltd

TEST REPORT

SCOPE OF WORK

EMC TESTING-EH1808

REPORT NUMBER

191113010GZU-002

ISSUE DATE

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Address : Road 2, Jingqianling Industrial Zone, HuangJiang Town, DongGuan,
GuangDong, China
Manufacturing Site : Same as applicant
Intertek Report No: 191113010GZU-002
FCC ID: 2AU8L-EH1808

Test standards

47 CFR PART 1, Subpart I, Section 1.1310
KDB 680106 D01 RF Exposure Wireless Charging Apps v02

Sample Description

Product : LED All-in-One Lamp
Models No. : EH1808
Electrical Rating : Adaptor (model: AED24-12020000WSW0):
Input:100-240Vac, 50/60Hz, 1.0A
Output: 12Vdc, 2A Max
Wireless charging pad: Output: 5W max
USB output: 5Vdc, 2.1A
Serial No. : Not Labeled
Date Received : 13 November 2019
Date Test Conducted : 13 November 2019-06 December 2019

Prepared and Checked By



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TEST REPORT**1.0 TEST RESULT SUMMARY**

Classification of EUT: Class B

Test Item	Standard	Result
EMF	47 CFR PART 1, Subpart I, Section 1.1310	PASS

Remark:

When determining the test results, measurement uncertainty of tests has been considered.

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2.0 General Description

2.1 Product Description

Operating Frequency 114-149KHz
Type of Modulation: MSK
Antenna Type Inductive loop coil antenna
Antenna gain: 0 dBi
Power Supply: 100-240Vac, 50/60Hz, 1.0A
Power cord: 1.8m x 2 wires unscreened cable

2.2 Test Facility

Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD Guangzhou, China

A2LA Certificate Number 0078.10

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch is accredited by A2LA and Listed in FCC website. FCC accredited test labs may perform both Certification testing under Parts 15 and 18 and Declaration of Conformity testing.

2.3 EUT Exercising Software

N/A

2.4 Special Accessories

N/A

2.5 Equipment Modification

Any modifications installed previous to testing by ACTION GmbH will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Guangzhou Branch.

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2.6 Support Equipment List and Description

This product was tested with corresponding support equipment as below:

Support Equipment:

Equipment	Model No.	Rating	Supplier
Mobile phone	Iphone 8	--	Intertek
USB cable (quantity: 1)	USB-02	0.8 m(unscreened)	Intertek
Concrete Resistance	--	2.0 Ω(quantity:1) 0.5 Ω (quantity:1)	Intertek

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above evaluated respectively

Pretest mode	Description	
Standby Mode	kept transmitting continuously	
Charging Mode	CH: Low	Mobile phone is charging at 1% battery power, 50% and 99% battery power respectively, keep transmitting continuously
	CH: Middle	
	CH: High	

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3.0 EMF TEST

3.1 Standard Requirement

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 limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.1m normally can be maintained between the user and the device.

(a) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S)(mW/cm ²)	Averaging Times 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
1500-100000	--	--	5	6

(b) 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/cm ²)	Averaging Times 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
1500-100000	--	--	1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density

TEST REPORT**3.2 Test Data**

Input Voltage: 120V/60Hz

Ambient Condition: 24°C, 50%RH

Test distance: 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils

H-Field Strength:

Test Position	Probe Measure Result (A/m)			50% Limit (A/m)	Limit (A/m)
	Mobile in 1% battery power	Mobile in 50% battery power	Mobile in 99% battery power		
Side 1	0.18	0.17	0.14	0.815	1.63
Side 2	0.17	0.16	0.15	0.815	1.63
Side 3	0.16	0.16	0.13	0.815	1.63
Side 4	0.16	0.15	0.12	0.815	1.63
Bottom	0.17	0.16	0.13	0.815	1.63
Top	0.20	0.16	0.15	0.815	1.63

TEST REPORT**4.0 Test Equipment List**

Equip. No.	Equipment	Model	Manufacturer	Cal. date	Due date
EM007-03	Exposure Level Tester	ELT-400	NARDA	2018/12/11	2019/12/11

*****End of the test report*****