

RF Exposure Report

Report No.: SA180627C20

Test Model: Ilium Alpha 9-W

Received Date: Jun. 27, 2018

Test Date: Jul. 03, 2018

Issued Date: Jul. 12, 2018

Applicant: Corporativo Lanix S.A. de C.V.

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Mexico

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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R.O.C.

Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
33383, TAIWAN (R.O.C.)

**FCC Registration /
Designation Number:** 788550 / TW0003



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Release Control Record

Issue No.	Description	Date Issued
SA180627C20	Original release	Jul. 12, 2018

1 Certificate of Conformity

Product: Wireless Charger

Brand: Lanix

Test Model: Ilium Alpha 9-W

Sample Status: Production Unit

Applicant: Corporativo Lanix S.A. de C.V.

Test Date: Jul. 03, 2018

Standards: FCC Part 1 (Section 1.1307(b), 1.1310)

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IEEE C95.1_2005

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Gina Liu, **Date:** Jul. 12, 2018
Gina Liu / Specialist

Approved by : Dylan Chiou, **Date:** Jul. 12, 2018
Dylan Chiou / Project Engineer

2 General Information

2.1 General Description of EUT

Product	Wireless Charger
Brand	Lanix
Test Model	Ilium Alpha 9-W
Sample Status	Production Unit
Power Supply Rating	9.0 Vdc (adapter) 5.0 Vdc (host equipment)
Modulation Type	ASK
Operating Frequency	111~148 kHz
Antenna Type	Coil antenna
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

1. The EUT has WPC (Wireless Power Consortium) technology.
2. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or User's Manual.

3 RF Exposure

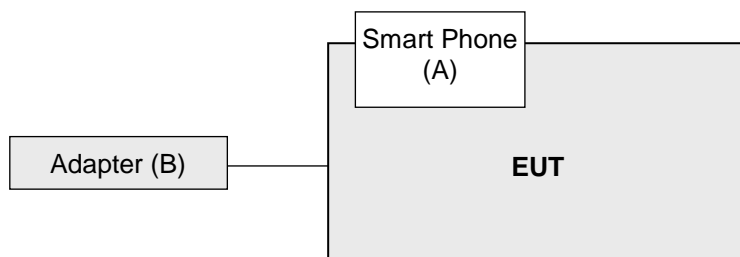
3.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

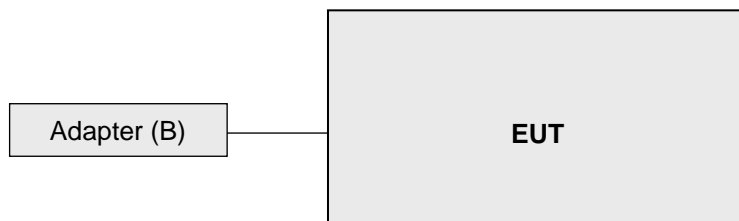
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Smart Phone	NA	NA	NA	NA	-
B.	Adapter	Lanix	Ilium Alpha 9-C	NA	NA	Provided by client

3.1.1 Configuration of System Under Test

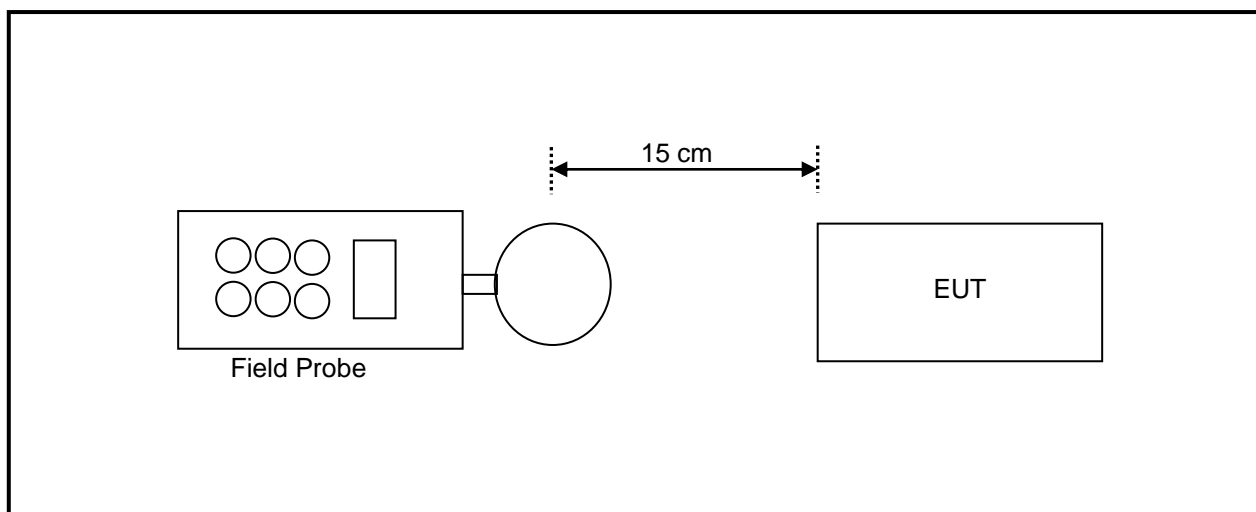
Charging Mode with phone



Standby Mode



3.2 Test Setup



Note: Measurements were made from all sides and the top of the primary/client pair, with the 15/20cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

3.3 Test Instruments

Description	Brand	Model No.	Frequency Range	Calibrated Date	Calibrated Until
Broadband Field Meter	NARDA	NBM-550	-	Mar. 28, 2018	Mar. 27, 2020
Magnetic Field Meter	NARDA	ELT-400	1 – 400kHz	Apr. 12, 2018	Apr. 11, 2020
Magnetic Probe	NARDA	HF 3061	300kHz – 30MHz	Apr. 16, 2018	Apr. 15, 2020
Magnetic Probe	NARDA	HF-0191	27 – 1000MHz	Apr. 17, 2018	Apr. 16, 2020
Broadband Field Meter	NARDA	NBM-550	-	Mar. 28, 2018	Mar. 27, 2020
Magnetic Field Probe	NARDA	2300/90.10	1Hz – 400kHz	Apr. 12, 2018	Apr. 11, 2020
E-Field Probe	NARDA	EF 0391	100kHz – 3GHz	Apr. 16, 2018	Apr. 15, 2020
E-Field Probe	NARDA	EF6091	100MHz – 60GHz	Apr. 17, 2018	Apr. 16, 2020

- Note: 1. The calibration interval of the above test instruments is 12/24 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa RF Chamber

3.4 Limits for Maximum Permissible Exposure (MPE)

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency(RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter.

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

* = Plane-wave equivalent power density

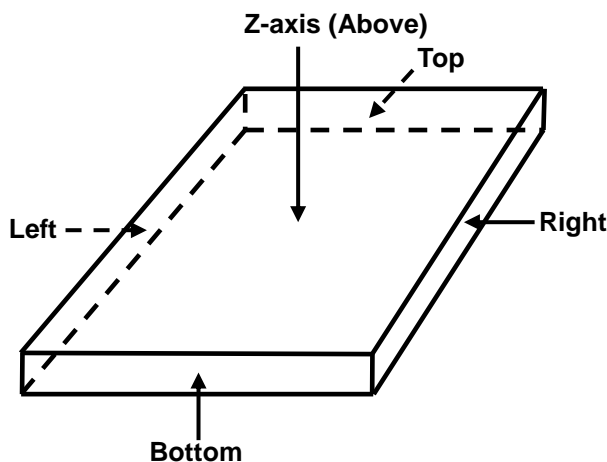
NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

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The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

3.5 Test Point Description



4 Calculation Result Of Maximum Conducted Power

For single frequency:

Charging Mode with phone, battery 10% Charge

E-Field Measurement (15cm)					E-Field (20cm)
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.88	0.98	1.02	0.92	0.97
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.12	-613.02	-612.98	-613.08	-613.03
50 % Limit (V/m)	307	307	307	307	307
50 % Margin (V/m)	-306.56	-306.51	-306.49	-306.54	-306.515

Charging Mode with phone, battery 10% Charge

H-Field Measurement (15cm)					H-Field (20cm)
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.118	0.121	0.109	0.124	0.113
Max H-field (A/m)	0.0944	0.0968	0.0872	0.0992	0.0904
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.5356	-1.5332	-1.5428	-1.5308	-1.5396
50 % Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50 % Margin (A/m)	-0.7678	-0.7666	-0.7714	-0.7654	-0.7698

Measurements were made from all sides and the top of the primary/client pair, with the 15/20cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode with phone, battery 50% Charge

E-Field Measurement (15cm)					E-Field (20cm)
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.96	1.12	1.24	1	1.03
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.04	-612.88	-612.76	-613	-612.97
50 % Limit (V/m)	307	307	307	307	307
50 % Margin (V/m)	-306.52	-306.44	-306.38	-306.5	-306.485

Charging Mode with phone, battery 50% Charge

H-Field Measurement (15cm)					H-Field (20cm)
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.128	0.127	0.116	0.136	0.125
Max H-field (A/m)	0.1024	0.1016	0.0928	0.1088	0.1
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.5276	-1.5284	-1.5372	-1.5212	-1.53
50 % Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50 % Margin (A/m)	-0.7638	-0.7642	-0.7686	-0.7606	-0.765

Measurements were made from all sides and the top of the primary/client pair, with the 15/20cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode with phone, battery 90% Charge

E-Field Measurement (15cm)					E-Field (20cm)
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	1.1	1.42	1.64	1.2	1.21
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.9	-612.58	-612.36	-612.8	-612.79
50 % Limit (V/m)	307	307	307	307	307
50 % Margin (V/m)	-306.45	-306.29	-306.18	-306.4	-306.395

Charging Mode with phone, battery 90% Charge

H-Field Measurement (15cm)					H-Field (20cm)
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.133	0.134	0.122	0.147	0.137
Max H-field (A/m)	0.1064	0.1072	0.0976	0.1176	0.1096
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.5236	-1.5228	-1.5324	-1.5124	-1.5204
50 % Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50 % Margin (A/m)	-0.7618	-0.7614	-0.7662	-0.7562	-0.7602

Standby Mode

E-Field Measurement (15cm)					E-Field (20cm)
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max E-field (V/m)	0.21	0.18	0.17	0.24	0.37
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-613.79	-613.82	-613.83	-613.76	-613.63
50 % Limit (V/m)	307	307	307	307	307
50 % Margin (V/m)	-306.895	-306.91	-306.915	-306.88	-306.815

H-Field Measurement (15cm)					H-Field (20cm)
EUT Side	Left	Right	Top	Bottom	Z-axis (Above)
Max H-field (uT)	0.124	0.132	0.118	0.145	0.135
Max H-field (A/m)	0.0992	0.1056	0.0944	0.116	0.108
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.5308	-1.5244	-1.5356	-1.514	-1.522
50 % Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50 % Margin (A/m)	-0.7654	-0.7622	-0.7678	-0.757	-0.761

Measurements were made from all sides and the top of the primary/client pair, with the 15/20cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

5 Photographs of the Test Configuration

Please refer to the attached file (Test Setup Photo).

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