FCC TEST REPORT

FCC ID: OXGSL90V2

Product	:	300L Ultimate light string
Model Name	:	SL90 (V2)
Additional model	:	N/A
Brand		N/A
Report No.	:	PTC20042005501-FC02

Prepared for

Willis Electric CO.,Ltd.

No.,504-1,Chung-Hua Road,Sec.4,Hsinchu,Taiwan.

Prepared by

Precise Testing & Certification Co., Ltd.

Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China.

TEST RESULT CERTIFICATION

Applicant's name	:	Willis Electric CO.,Ltd.
Address	:	No.,504-1,Chung-Hua Road,Sec.4,Hsinchu,Taiwan.
Manufacture's name	:	Kupoint (Dongguan) Electric Co., Ltd
Address	:	Huaide Village, Humen, Dongguan, Guangdong
Product name	:	300L Ultimate light string
Model name	:	SL90 (V2)
Test procedure		KDB 447498 D01 General RF Exposure Guidance v05
Test Date	:	Apr. 21, 2020 to Apr. 29, 2020
Date of Issue	:	Apr. 29, 2020
Test Result	:	Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

Leo Yang / Engineer

Technical Manager:

Chris Du / Manager

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2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS
Remark:		
N/A: Not Applicable		

3 General Information

3.1 General Description of E.U.T.

Product Name	:	300L Ultimate light string
Model Name	:	SL90 (V2)
Additional model		N/A
Model Description	:	N/A
Bluetooth Version	:	N/A
Operating frequency	:	WiFi A:802.11b/g/n HT20: 2412-2462MHz A:802.11b/g/n HT20: 2412-2462MHz
Type of Modulation	:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Antenna installation:	:	External Antenna/Ceramic Antenna
Antenna Gain: The directional gain	:	WIFI:1dbi WIFI:4.01dbi
Power supply	:	Adapter model:XY50SA-290150VQ-UT Input:AC100-120V,50/60Hz,1.2A Max ;Output : DC29V 1.5A
Adapter	:	Input:AC100-120V,50/60Hz,1.2A Max ;Output : DC29V 1.5A

4 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : FCC Part 2.1091

4.1 Requirements

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 levels 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 0.2 m normally can be maintained between the user and the device.

4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
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

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
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			1.0	30

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

4.3 MPE Calculation Method

E (V/m) = $\frac{\sqrt{30 \times P \times G}}{d}$ Power Density: Pd (W/m²) = $\frac{E^2}{377}$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

Pd = $\frac{30 \times P \times G}{377 \times d^2}$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

4.4 Test Result

Item	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Peak Output Power (mw)	Power Density (mW/cm2)	Limit of Power Density (mW/cm2)	Result
WIFI A	1.258	15.78	37.84	0.0095	1	Pass
WIFI B	1.258	15.63	36.48	0.0091	1	Pass
ANT A+ANT B	2.518	18.83	76.38	0.0383	1	Pass

********THE END REPORT********