



FCC TEST REPORT

FCC ID: 2A3K4PL001-PL008

Product	:	smart light panels
Model Name	:	Smart light PL001
Additional model	:	Smart light PL002; Smart light PL003; Smart light PL004; Smart light PL005; Smart light PL006; Smart light PL007; Smart light PL008
Brand	:	N/A
Report No.	:	PTC21061501901E-FC04
Prepared for		
Shenzhen Qingtuo Technology Co.,Ltd		
Unit 302,3rd Floor,Bld A2,Langxin Ind'l Area,Langxin Community,Shiyan Street, Shenzhen		
Prepared by		
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TEST RESULT CERTIFICATION

Applicant's name : Shenzhen Qingtuo Technology Co.,Ltd
Address : Unit 302,3rd Floor,Bld A2,Langxin Ind'l Area,Langxin Community,Shiyan Street, Shenzhen
Manufacture's name : Shenzhen Qingtuo Technology Co.,Ltd
Address : Unit 302,3rd Floor,Bld A2,Langxin Ind'l Area,Langxin Community,Shiyan Street, Shenzhen
Product name : smart light panels
Model name : Smart light PL001
Test procedure : KDB 447498 D01 General RF Exposure Guidance v06
Test Date : Jun. 28, 2021 to Jul 2, 2021
Date of Issue : Jul. 2, 2021
Test Result : Pass

This device described above has been tested by PTS, 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:

A handwritten signature in black ink that reads "Leo Yang" with a long, sweeping horizontal stroke at the end.

Leo Yang / Engineer

Technical Manager:

A handwritten signature in black ink that appears to read "Chris Du" in a stylized, cursive font.

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	:	smart light panels
Model Number	:	Smart light PL001
Additional model	:	Smart light PL002; Smart light PL003; Smart light PL004; Smart light PL005; Smart light PL006; Smart light PL007; Smart light PL008
Description of Model difference	:	The internal electrical principle and structure are consistent. The appearance and color model naming is different, the difference does not affect the electromagnetic compatibility and safety rules. The differences of appearance and color are just only for light panels
Specification	:	BT 4.2 BDR+EDR ; BLE 802.11b/g/n HT20
Operating frequency	:	2402-2480MHz for BT 2412-2462MHz for 802.11b; 2412-2462MHz for 802.11g; 2412-2462MHz for 802.11n(HT20)
Modulation	:	GFSK, $\pi/4$ -DQPSK, 8DPSK For DSS; GFSK For BLE; DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Number of Channel	:	79 channels For BR+EDR; 40 channels For BLE 11 channels For Wifi;
Antenna installation	:	PCB Antenna
Antenna Gain	:	2.5 dBi
Power supply	:	Adapter model: JYH36-2401500-BX Input: AC 100V-240V 50/60HZ 1.2A Output: DC 24V 1.5A 36W Adapter model: JYH3Z-2400100-BX Input: AC 100V-240V 50/60HZ 0.8A Output: DC 24V 1.0A 24W
Hardware Version	:	N/A
Software Version	:	N/A



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

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

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

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

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 (W)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
WIFI	1.78	14.29	0.02685	0.0950	1	Pass
BR+EDR	1.78	-1.14	0.000769	0.0025	1	Pass
BLE	1.78	3.52	0.002249	0.0079	1	Pass

NOTE1: 802.11G 2462 worst case

NOTE2: WIFI and Bluetooth function are not support simultaneously work

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