

Opple Lighting Co.,Ltd

MPE ASSESSMENT REPORT

Report Type:

FCC Part §2.1091 and §1.1307(b) assessment report

MODEL:

w241 Faro

REPORT NUMBER:

2412B0028SHA-002

ISSUE DATE:

January 21, 2025

DOCUMENT CONTROL NUMBER:

TTRFFCCMPE-01_V1 © 2018 Intertek



TEST REPORT

Applicant: Opple Lighting Co.,Ltd
Room 411, Building 1 No. 6111,Longdong Avenue, Pudong New District,
Shanghai City 201201,P. R. China

Manufacturer: Opple Lighting Co.,Ltd
Room 411, Building 1 No. 6111,Longdong Avenue, Pudong New District,
Shanghai City 201201,P. R. China

FCC ID: 2BMMWW241FARO

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06
FCC Part2.1091, FCC Part1.1307(b)

PREPARED BY:



Project Engineer
Erick Liu

REVIEWED BY:



Reviewer
Wakeyou Wang

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Revision History

Report No.	Version	Description	Issued Date
2412B0028SHA-002	Rev. 01	Initial issue of report	January 21, 2025

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Portable luminaires
Type/Model:	w241 Faro
Description of EUT:	The EUT is lighting with BLE function, it has only one model.
Rating:	5V DC, 2A
EUT type:	<input checked="" type="checkbox"/> Table top <input type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	December 4, 2024
Date of test:	December 15, 2024 ~ January 4, 2025

1.2 Technical Specification

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.15.1
Type of Modulation:	GFSK
Channel Number:	40
Data Rate:	1Mbps
Channel Separation:	2MHz
Antenna Information:	PCB Antenna: 2.18dBi

TEST REPORT

1.3 Description of Test Facility

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L21189
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	-
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	-
0,8-3 kHz	$250/f$	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	$0,73/f$	$0,92/f$	-
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

TEST REPORT

2.2 Assessment Results

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 2412B0028SHA-001:

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

Mode	Frequency band	Power		Antenna Gain	R	S	Limits
	(MHz)	dBm	mW	dBi	(cm)	(mW/cm ²)	(mW/cm ²)
BLE	2402 - 2480	7.08	5.11	2.18	20	0.0017	1

The worst MPE = 0.0017mW/cm² < 1 mW/cm².

Note: 1 mW/cm² from 1.310 Table 1.

Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

*****END*****