RF Exposure Evaluation Report

Product	:	Smart Light
Trade mark	:	N/A
Model/Type reference	:	EW202W
Serial Number	:	N/A
Report Number	:	EED32P80441304
FCC ID	:	2ADIOEW202W
Date of Issue	:	Apr. 20, 2023
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 1.1310 47 CFR Part 2.1091 47 CFR Part 2.1093 447498 D04 Interim General RF Exposure Guidance v01
Test result	:	PASS

Prepared for:

Shenzhen Medica Technology Development Co., Ltd.
Floor 12, Block A, Building 7, Vanke Yun city, XingKe one street, NanShan District, Shenzhen City.

Prepared by:

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	Aaron Ma		

Check No.: 8438211222

2 Version

Version No.	Date	Description
00	Apr. 20, 2023	Original

3 Contents

4 General Information

4.1 Client Information

Applicant:	Shenzhen Medica Technology Development Co., Ltd
Address of Applicant:	Floor 12, Block A, Building 7, Vanke Yun city, XingKe one street, NanShan District, Shenzhen City.
Manufacturer:	Shenzhen Medica Technology Development Co., Ltd
Address of Manufacturer:	Floor 12, Block A, Building 7, Vanke Yun city, XingKe one street, NanShan District, Shenzhen City.
Factory:	Shenzhen Medica Technology Development Co., Ltd
Address of Factory:	Floor 12, Block A, Building 7, Vanke Yun city, XingKe one street, NanShan District, Shenzhen City.

4.2 General Description of EUT

Product Name:	Smart Light
Model No.(EUT):	EW202W
Trade Mark:	N/A

4.3 Product Specification subjective to this standard

Frequency Range:	BT/BLE: 2402MHz~2480MHz 2.4G WIFI: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz	
Modulation Type:	BLE: GFSK BT: GFSK, π/4DQPSK, 8DPSK 2.4G WIFI: IEEE for 802.11b:DSSS(CCK, DQPSK, DBPSK) IEEE for 802.11g:OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40): OFDM (64QAM, 16QAM,QPSK,BPSK)	
Test Power Grade:	Default	
Test Software of EUT:	EspRFtestTool	
Antenna Type:	FPC Antenna	
Antenna Gain:	4.6dBi	
Power Supply:	Adapter	Model: KA12H-1201000US Input: 100-240V, 50/60Hz, 0.4A Max Output: 12V⎓1000mA
Sample Received Date:	Mar. 31, 2023	
Sample tested Date:	Mar. 31, 2023 to Apr. 17, 2023	
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.		

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).
This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula

$$P_{\text{th}}\,(\text{mW}) = \begin{cases} ERP_{20\text{ cm}}(d/20\text{ cm})^{x} & d \le 20\text{ cm} \\ ERP_{20\text{ cm}} & 20\text{ cm} < d \le 40\text{ cm} \end{cases}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\text{ cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and ERP20cm is per Formula (B.1).

$$P_{\text{th}}\,(\text{mW}) = ERP_{20\text{ cm}}\,(\text{mW}) = \begin{cases} 2040f & 0.3\text{ GHz} \le f < 1.5\text{ GHz} \\ 3060 & 1.5\text{ GHz} \le f \le 6\text{ GHz} \end{cases} \qquad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

5.1.3 EUT RF Exposure Evaluation

For Stand alone:

For BLE:

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2480	0.74	4.6	5.34	3.19	2.084	3060	PASS

For BT Classic:

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2480	3.41	4.6	8.01	5.86	3.855	3060	PASS

For 2.4G WIFI:

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2480	16.54	4.6	21.14	18.99	79.250	3060	PASS

For BT and WIFI:

BT and WIFI can not transmit simultaneously.

Note：

①EIRP=conducted power+antenna gain；

②ERP=EIRP-2.15；

③Only the worst case data was recorded in the report.

*** End of Report ***