

FCC RF Exposure

Applicant : Shuzhiyinli (Xiamen) Sports Technology Co., Ltd.
Unit 2401-1, Building B10, Software Park Phase III,
Address : Houxi Town, Jimei District, Xiamen, Fujian Province,
China
Product Name : Intelligent Strength Training Mirror
Brand Mark : IMBODY
Model : IM8C40
Series model : IM8B40, IM7B40, IM7C40
FCC ID : 2BP9T-IM8C40
Report Number : BLA-EMC-202505-A8506
Date of Receipt : May 28, 2025
Date of Test : May 29, 2025 to Jul. 29, 2025
47 CFR Part 15, Part1.1307
Test Standard : 47 CFR Part 15, Part2.1093
KDB447498D04 General RF Exposure Guidance v01
Test Result : Pass

Compiled by: charlie Review by: Xavier Approved by: 131416 Zheng
Issued Date: Jul. 31, 2025



BlueAsia of Technical Services(Shenzhen) Co.,Ltd.

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Table of Contents

1 General information	4
1.1 General information	4
1.2 General description of EUT	4
2 Laboratory and accreditations	6
3 RF Exposure Compliance Requirement	7
3.1 Standard Requirement	7
3.2 Limits	7
3.3 Result	错误! 未定义书签。

Revise Record

Version No.	Date	Description
01	Jul. 31, 2025	Original

1 General information

1.1 General information

Applicant	Shuzhiyinli (Xiamen) Sports Technology Co., Ltd.
Address	Unit 2401-1, Building B10, Software Park Phase III, Houxi Town, Jimei District, Xiamen, Fujian Province, China
Manufacturer	Shuzhiyinli (Xiamen) Sports Technology Co., Ltd.
Address	Unit 2401-1, Building B10, Software Park Phase III, Houxi Town, Jimei District, Xiamen, Fujian Province, China
Factory	Shuzhiyinli (Xiamen) Sports Technology Co., Ltd.
Address	Unit 2401-1, Building B10, Software Park Phase III, Houxi Town, Jimei District, Xiamen, Fujian Province, China

1.2 General description of EUT

Product name	Intelligent Strength Training Mirror
Model no.	IM8C40
Series model	IM8B40,IM7B40,IM7C40
Desc of series model	Different screen sizes, different force arm gear settings, and differences in the appearance of the force arm buttons.
Operation Frequency	Bluetooth&BLE: 2402MHz-2480MHz 2.4G Wi-Fi: 2412MHz-2462MHz 5.2G Wi-Fi: 5180MHz-5240MHz
Modulation Type	BLE: GFSK Bluetooth: GFSK, $\pi/4$ DQPSK, 8DPSK 2.4G Wi-Fi: DSSS, OFDM, OFDMA 5.2G Wi-Fi: OFDM, OFDMA
Number of Channels	BLE: 40; Bluetooth: 79; 2.4G Wi-Fi: 11; 5.2G Wi-Fi: 7
Antenna Type	FPC Antenna
Antenna Gain	Bluetooth&BLE: 0.93dBi(Provided by customer) 2.4GWi-Fi 1&2.4GWi-Fi 2: 0.93dBi(Provided by customer) 5.2GWi-Fi 1&5.2GWi-Fi 2: 2.69dBi(Provided by customer)
Power supply	Input: AC90V~265V, 50~60Hz

	Output: DC15V, 150W Button battery on RF module: CR2032 DC3.0V
Hardware Version	N/A
Software Version	N/A

BlueAsia

2 Laboratory and accreditations

The test facility is recognized, certified, or accredited by the following organizations:

Company name:	BlueAsia of Technical Services(Shenzhen) Co., Ltd.
Address:	Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province, China
CNAS accredited No.:	L9788
A2LA Cert. No.:	5071.01
FCC Designation No.:	CN1252
ISED CAB identifier No.:	CN0028
Telephone:	+86-755-28682673
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3 RF Exposure Compliance Requirement

3.1 Standard Requirement

According to 447498 D04 Interim General RF Exposure Guidance v01

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

3.2 Limits

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B. 2})$$

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 $ERP_{20 \text{ cm}}$ is per Formula (B.1).

Example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

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

3.3 Result

$$\text{EIRP} = \text{pt} \times \text{gt} = (\text{E} \times \text{d})^{2/30}$$

Where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m,

d = measurement distance in meters (m)

$$\text{Spot} = (\text{E} \times \text{d})^{2/30} \times \text{gt}$$

Separation distance= 20cm

Ant gain:

Bluetooth&BLE = 0.93 dBi

2.4G Wi-Fi 1&2.4G Wi-Fi 2=0.93dBi

5.2G Wi-Fi 1&5.2G Wi-Fi 2=2.69dBi

For BT Classic(GFSK)

Max Output power =7.91dBm @ 2480MHz

$$\text{EIRP} = 7.91\text{dBm} + 0.93\text{dBi} = 8.84\text{dBm}, \text{ So ERP} = 8.84\text{dBm} - 2.15 = 6.69\text{dBm}$$

EIRP>ERP, So Evaluate with EIRP value, 8.84dBm=7.66mW<3060mW

For BLE

Max Output power =3.68dBm @ 2480MHz

$$\text{EIRP} = 3.68\text{dBm} + 0.93\text{dBi} = 4.61\text{dBm}, \text{ So ERP} = 4.61\text{dBm} - 2.15 = 2.46\text{dBm}$$

EIRP>ERP, So Evaluate with EIRP value, 3.68dBm=5.47mW<3060mW

For 2.4G Wi-Fi(802.11ax20-Sum)

Max Output power =16.75dBm @ 2412MHz

$$\text{EIRP} = 16.75\text{dBm} + 0.93\text{dBi} = 17.68\text{dBm}, \text{ So ERP} = 17.68\text{dBm} - 2.15 = 15.53\text{dBm}$$

EIRP>ERP, So Evaluate with EIRP value, 17.68dBm=58.61mW<3060mW

For 5.2G Wi-Fi(802.11ax20-Sum)

Max Output power =16.75dBm @ 5240MHz

$$\text{EIRP} = 16.75\text{dBm} + 2.69\text{dBi} = 19.44\text{dBm}, \text{ So ERP} = 19.44\text{dBm} - 2.15 = 17.29\text{dBm}$$

EIRP>ERP, So Evaluate with EIRP value, 19.44dBm=87.30mW<3060mW

So, The worst working mode is BT+5.2GWiFi

$$7.66\text{mW} + 87.30\text{mW} = 94.96\text{mW} < 3060\text{mW}$$

Comply with RF exposure exemption limit.

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Version:v1.1

----END OF REPORT----

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