RF EXPOSURE

EXEMPT REPORT

MANUFACTURER	:	Innovative Eyewear, Inc.
PRODUCT NAME	:	Active noise cancelling stereo Bluetooth headphone
MODEL NAME	:	LCD00X
BRAND NAME	:	Lucyd, Nautica, Eddie Bauer, Reebok
STANDARD(S)	:	EN 50663:2017
RECEIPT DATE	:	2023-06-29
TEST DATE	:	2023-07-05 to 2023-07-17
ISSUE DATE	:	2023-08-24

Edited by: Su xiaoxian

Su Xiaoxian (Rapporteur)

Approved by: Shen Junsheng

Shen Junsheng (Supervisor)

MORLAB
Shenzhen Morlab Communications Technology Co., Ltd.
FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China
Tel: 86-755-36698555 Fax: 86-755-36698525
Http://www.morlab.cn E-mail: service@morlab.cn

DIRECTORY

Change History		
Version	**Date**	**Reason for change**
1.0	2023-08-24	First edition

1. Technical Information

Note: Provide by manufacturer.

1.1. Manufacturer and Factory Information

Manufacturer:	Innovative Eyewear, Inc.
Manufacturer Address:	11900 Biscayne Bl, Suite 630, North Miami, FL 33181-2743, United States
Factory:	Hotus Technology (Shenzhen) Co., Ltd.
Factory Address:	Room 401, Building 2, No. 7, Yongtai East Road, East District, Baishixia Community, Fuyong Street, Baoan District, Shenzhen

1.2. Equipment Under Test (EUT) Description

Product Name:	Active noise cancelling stereo Bluetooth headphone
Sample No.:	4#
Hardware Version:	HT-LCD006-V02
Software Version:	Lucyd Lyte-1735-b4f52dd3
Frequency Bands:	Bluetooth: 2402MHz ~ 2480MHz
Bluetooth Version:	5.3
Modulation Mode:	GFSK, π/4-DQPSK
Antenna Type:	Ceramic Antenna
Antenna Gain:	3.12dBm

Note 1: According to the certificate holder, they declare that the for model: LCD00X have multiple brands, These different trade names are as follows: Lucyd, Nautica, Eddie Bauer, Reebok, only different for brand name, all RF parameters remain the same. The main measuring model is Lucyd, only the results for Lucyd were recorded in this report.

Note 2: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

Note 3: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.

2. Human Exposure to the Electromagnetic Fields Limit

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 of the following limits.

➢ **For frequency range 10 MHz to 10 GHz**

1. The basic restriction at frequencies between 10 MHz and 100 GHz is on localized SAR in the head. Any device with output power below 20 mW cannot produce an exposure exceeding this restriction under the most pessimistic exposure conditions.
2. The basic restriction is 2 W/kg so any unit which supplies less than 20 mW (=2/100W) from its antenna port, averaged over 6 minutes, will meet the basic restriction.

➢ **For frequency range 10 GHz to 300 GHz**

1. The most conservative assumption is that all the transmitted power is absorbed within the specified area, therefore any device which supplies less than 20 mW will meet the basic restriction. The average time is equal to $68/f^{-1.05}$ minutes (where f is in GHz).
2. In the frequency range 10 GHz to 300 GHz, the basic restriction is 10 W/m^2 averaged over any 20 cm^2 of exposed area with a spatial maximum of 200 W/m^2 averaged over 1 cm^2.

➢ **Criteria A: All electromagnetic fields**

1. If the average power emitted by apparatus operating in the frequency range 10 MHz – 300GHz is less that or equal to 20 mW and the transmitting peak power is less than 20W then the apparatus is deemed to comply with the basic restrictions without testing. Averaging time is 6 minutes in the frequency range 10 MHz to 10 GHz. The average time is equal to $68/f^{-1.05}$ minutes (where f is in GHz) in the frequency range 10 GHz to 300 GHz.
2. If the total supply power or the input power to the circuitry producing the greatest emissions in the device is less than or equal to 20 mW then it is assumed that the emitted power is less than 20 mW.

➢ **Criteria B: Pulse modulated electromagnetic fields with pulse duration less than 30 microseconds**

For pulses of duration less than 30 microseconds at frequencies between 300 MHz and 10 GHz, there is also a basic restriction on Specific energy absorption (SA). This is 2mJ kg^{-1} in any 10g of tissue in the head. For most pulses, the SAR restriction will be more stringent, but for pulses with a repetition frequency of less than 100 Hz, the SA restriction will predominate. For devices producing pulses with repetition rates below 100 Hz, the average power should be less than 20 x prf mW (pulse repetition frequency, prf in Hz).

3. Test Results

Bluetooth output power

Mode	E.I.R.P (dBm)	
	GFSK	π/4-DQPSK
BT classic (Hopping Mode)	**2.96**	1.24

Note:

1. According to EN 62479:2010, output power level shall be the higher of the maximum conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power and it will be used for calculating exemption Limits for Routine Assessment.
2. The output power refers to report (Report No.: SZ23060306W01).

4. RF Exposure Assessment

➢ **Low-power Exclusion Level P_{max} based on considerations of SAR:**

When SAR is the basic restriction, a conservative minimum value for P_{max} can be derived, equal to the localized SAR limit (SAR_{max}) multiplied by the averaging mass (m):

$$P_{max} = SAR_{max} \cdot m$$

Example values of P_{max} according to Equation (A.1) are provided in Table A.1 for cases described by the ICNIRP guidelines [1], IEEE Std C95.1-1999 [2] and IEEE Std C95.1-2005 [3] where SAR limits are defined.

➢ **Standalone Transmission Assessment:**

The E.I.R.P. of Bluetooth at worst case is **2.96dBm→1.98mW**, which is less than the exempt condition, 20mW specified in EN 50663.

➢ **Simultaneous Transmission Assessment:**

No.	Simultaneous Transmission Consideration	Head
1	Bluetooth Left ear + Bluetooth Right ear	Yes

➢ **Conclusion**

According to EN 50663, this device complies with EMF basic restrictions and SAR measurement is not required.

Annex A General Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

END OF REPORT