



# RF Exposure Evaluation Report

**Application No.:** DNT2506190439R6448-08043  
**Applicant:** Yiwu Yuanben Technology Co., Ltd  
**Address of Applicant:** 1st Floor, Building 17, Yangcun Fifth District, Choujiang Street, Yiwu City, Zhejiang, China  
**EUT Description:** Wireless electronic eyepiece  
**Model No.:** PNL-WF001  
**FCC ID:** 2BQO5-PNL-WF001  
**Power supply** Input DC 5V; DC 3.7V From rechargeable lithium-ion battery  
**Trade Mark:** /  
**Standards:** 47 CFR Part 2.1091  
FCC KDB 447498 D01 v06  
**Date of Receipt:** 2025/6/19  
**Date of Test:** 2025/6/20 to 2025/7/4  
**Date of Issue:** 2025/7/7  
**Test Result:** **PASS**

**Prepared By:** Wayne Lin (Testing Engineer)



**Reviewed By:** Pencils Chen (Project Engineer)

**Approved By:** Yiwee Chen (Manager)

Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.

**Dongguan DN Testing Co., Ltd.**

Add: No. 1, West Fourth Street, Xingfa South Road, Wusha Community, Chang'an Town, Dongguan City, Guangdong P.R.China

Web: [www.dn-testing.com](http://www.dn-testing.com)

Tel: +86-769-88087383

E-mail: [service@dn-testing.com](mailto:service@dn-testing.com)

**Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	July 7, 2025	Valid	Original Report



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## 1 General Information

### 1.1 Test Location

Company:	Dongguan DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xingfa Road, Wusha Liwu, Chang'an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

### 1.2 General Description of EUT

Manufacturer:	Yiwu Yuanben Technology Co., Ltd
Address of Manufacturer:	1st Floor, Building 17, Yangcun Fifth District, Choujiang Street, Yiwu City, Zhejiang, China
EUT Description::	Wireless electronic eyepiece
Test Model No.:	PNL-WF001
Additional Model(s):	/
Chip Type:	SV6158
Serial Number	PR2506190439R6448
Power Supply:	Input DC 5V; DC 3.7V From rechargeable lithium-ion battery
Trade Mark:	/
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	2.4GWIFI:2412-2462MHz(BW:20MHz)
Type of Modulation:	2.4GWIFI:DSSS,OFDM
Sample Type:	<input type="checkbox"/> Portable Device, <input type="checkbox"/> Module, <input checked="" type="checkbox"/> Mobile Device
Antenna Type:	<input checked="" type="checkbox"/> External, <input type="checkbox"/> Integrated
Antenna Gain:	<input checked="" type="checkbox"/> Provided by applicant 2.26dBi

#### Remark:

\*Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information, DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.



## 2 RF Exposure Evaluation

### 2.1 RF Exposure Compliance Requirement

#### 2.1.1 Limits

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz

\*=Plane-wave equivalent power density

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

Friis Formula

Friis transmission formula:  $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P<sub>d</sub> = power density in mW/cm<sup>2</sup>

P<sub>out</sub> = output power to antenna in mW

G = gain of antenna in linear scale

$\pi = 3.1416$

R = distance between observation point and center of the radiator in cm

P<sub>d</sub> is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.



## 2.1.2 Test Procedure

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

## 2.1.3 EUT RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.0 / 2.0 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

This confirmed that the device comply with MPE limit.

Test Mode	Antenna	Freq(MHz)	Power [dBm]
11B	Ant1	2412	19.92
		2437	20.37
		2462	20.06
11G	Ant1	2412	20.99
		2437	21.03
		2462	21.28
11N20	Ant1	2412	21.39
		2437	20.81
		2462	20.90

The Worst Mode	Antenna	Peak output power (dBm)	Target power (dBm)	MAX Target power (dBm)	Antenna gain		Power Density (S) (mW/cm <sup>2</sup> )	Limited of Power Density (S) (mW/cm <sup>2</sup> )	Test Result	Distance (cm)
					(dBi)	(Linear)				
2.4G Band										
2.4GWIFI	Ant 1	21.39	21±1	22	2.26	1.6827	0.0531	1	Complies	20

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The End Report