

## **FCC RF EXPOSURE REPORT**

*For*

**Smart Laser Projector**

**MODEL NUMBER: PJ08, PJ08 Pro, PJ08 Max, PJ09, PJ09 Pro, PJ09 Max, Nova Mini, Nova Pro, Nova Max**

**REPORT NUMBER: 4791535816-1-RF-5**

**ISSUE DATE: May 16, 2025**

**FCC ID: 2AWDN-PJ08**

*Prepared for*

**Nexight INC  
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*Prepared by*

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## Revision History

Rev.	Issue Date	Revisions	Revised By
V0	May 16, 2025	Initial Issue	

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## 1. ATTESTATION OF TEST RESULTS

### Applicant Information

Company Name: Nexight INC  
Address: 11075 SW 11th St, Beaverton, OR 97005, United States

### Manufacturer Information

Company Name: Nexight INC  
Address: 11075 SW 11th St, Beaverton, OR 97005, United States

### EUT Information

EUT Name: Smart Laser Projector  
Model: PJ08  
Series Model: PJ08 Pro, PJ08 Max, PJ09, PJ09 Pro, PJ09 Max, Nova Mini, Nova Pro, Nova Max  
Brand:

Sample Received Date: November 08, 2024  
Sample Status: Normal  
Sample ID: 7804558  
Date of Tested: November 25, 2024 to May 15, 2025



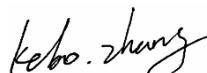
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
447498 D04 Interim General RF Exposure Guidance v01	PASS

Prepared By:



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Checked By:



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Senior Project Engineer

Approved By:



Stephen Guo  
Operations Manager

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 1 Subpart I, section 1.1307 and KDB 447498 D04 Interim General RF Exposure Guidance v01.

## 3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p><b>A2LA (Certificate No.: 4102.01)</b> UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p><b>FCC (FCC Designation No.: CN1187)</b> UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.</p> <p><b>ISED (Company No.: 21320)</b> UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.</p>
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**Note 1:**

All tests measurement facilities use to collect the measurement data are located at Room 101, Building 2, No.4, Information Road, Songshan Lake, Dongguan, Guangdong, China.

**Note 2:**

The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

**Note 3:**

For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.

#### 4. DESCRIPTION OF EUT

EUT Name		Smart Laser Projector
FCC Model		PJ08
FCC Series Model		PJ08 Pro, PJ08 Max, PJ09, PJ09 Pro, PJ09 Max, Nova Mini, Nova Pro, Nova Max
FCC Model difference		All models under this certification only differ in terms of color and model name.
Product Description (BT)	Frequency Range:	2402 MHz to 2480 MHz
	Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
	Type of Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Product Description (BLE)	Frequency Range:	2402 MHz to 2480 MHz
	Type of Modulation:	GFSK
	Data Rate:	1Mbps/2Mbps
Product Description (2.4G WLAN)	Frequency Range:	2412 MHz to 2462 MHz
	Type of Modulation:	IEEE 802.11b: DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g/n: OFDM(64-QAM, 16-QAM, QPSK, BPSK)
	Radio Technology:	IEEE 802.11b/g/n HT20/n HT40
Product Description (5G WLAN)	Frequency Range:	5180 MHz to 5240 MHz 5260 MHz to 5320 MHz 5500 MHz to 5700 MHz 5745 MHz to 5825 MHz
	Type of Modulation:	IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK)
	Radio Technology	IEEE 802.11a20 IEEE 802.11n HT20/HT40 IEEE 802.11ac VHT20/VHT40/VHT80
Normal Test Voltage:		AC 120 V, 60 Hz

## 5. REQUIREMENT

### LIMIT AND CALCULATION METHOD

According to 447498 D04 Interim General RF Exposure Guidance v01,

#### 2.1.4 MPE-Based Exemption

An alternative to the SAR-based exemption is provided in § 1.1307(b)(3)(i)(C), for a much wider frequency range, from 300 kHz to 100 GHz, applicable for separation distances greater or equal to  $\lambda/2\pi$ , where  $\lambda$  is the free-space operating wavelength in meters. The MPE-based test exemption condition is in terms of ERP, defined as the product of the maximum antenna gain and the delivered maximum time-averaged power.<sup>10</sup> For this case, a RF source is an RF exempt device if its ERP (watts) is no more than a frequency-dependent value, as detailed tabular form in Appendix B. These limits have been derived based on the basic specifications on Maximum Permissible Exposure (MPE) considered for the FCC rules in § 1.1310(e)(1).

#### MPE-based Exemption

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

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

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).

**CALCULATED RESULTS****For Single RF Source**

Operating Mode	Max. Tune up Power	Max. Antenna Gain	EIRP	ERP	ERP	Distance	Limit Threshold
	(dBm)	(dBi)	(dBm)	(dBm)	(mW)	(cm)	(mW)
BT	9	2.81	11.81	9.66	9.25	20	3060
BLE	4.50	2.81	7.31	5.16	3.28	20	3060
WIFI2.4G	19	4.26	23.26	21.11	129.12	20	3060
WIFI5G	16	4.13	20.13	17.98	62.81	20	3060

Note:

1. The calculated distance is 20 cm.
2. The power comes from operation description.
3. BT&WLAN 2.4G, BT & WLAN 5G, WLAN 2.4G & WLAN 5G can't transmit simultaneously.  
(declared by client)

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**END OF REPORT**