

TEAT DEDART						
	TEST REPOR					
FCC ID:	2BN8F-CAMR50					
Test Report No::	TCT250613E043					
Date of issue::	Jun. 19, 2025					
Testing laboratory:	SHENZHEN TONGCE TESTING	G LAB				
Testing location/ address:	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China					
Applicant's name::	NUMLAKE TECH LIMITED					
Address::	UNIT 1505, 15/F WORKINGPOF HAU FOOK STREET TSIM SHA					
Manufacturer's name:	NUMLAKE TECH LIMITED					
Address::	UNIT 1505, 15/F WORKINGPORT COMMERCIAL BUILDING 3 HAU FOOK STREET TSIM SHA TSUI HONG KONG, China					
Standard(s)::	FCC CFR Title 47 Part 1.1307					
Product Name::	Wi-Fi 1080p Battery Camera with Solar Panel					
Trade Mark:	N/A					
Model/Type reference:	R50, R10, R20, R30, R60, R70, R80, R90					
Rating(s)::	Rechargeable Li-ion Battery DC 3.7V					
Date of receipt of test item	Jun. 13, 2025					
Date (s) of performance of test:	Jun. 13, 2025 ~ Jun. 19, 2025					
Tested by (+signature):	Ronaldo LUO	R-rald Fusce				
Check by (+signature):	Beryl ZHAO					
Approved by (+signature):	Tomsin Jonsin					

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## **Table of Contents**

1 2. 0 2 2 3. F 3 4. L	General Pro .1. EUT desc .2. Model(s) General Info .1. Test envi .2. Descripti acilities ar .1. Facilities .2. Location Limit	cription listormation fronment a on of Sup nd Accre	and mode.				344555
5. T	Test Result	s and Me	easuremo	ent Data	•••••		(c)



## 1. General Product Information

## 1.1. EUT description

Product Name:	Wi-Fi 1080p Battery Camera with Solar Panel				
Model/Type reference:	R50				
Sample Number:	TCT250613E005-0101				
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11ff(H120)) 2422MHz~2452MHz (802.11n(HT40))				
Modulation Type:	For BLE: GFSK For WIFI: 802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n: Orthogonal Frequency Division Multiplexing (OFDM)				
Antenna Type:	Internal Antenna				
Antenna Gain:	2.99dBi				
Rating(s):	: Rechargeable Li-ion Battery DC 3.7V				

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

## 1.2. Model(s) list

No.	Model No.	Tested with
(01)	R50	$\boxtimes$
Other models	R10, R20, R30, R60, R70, R80, R90	

Note: R50 is tested model, other models are derivative models. The models are identical in circuit and PCB layout, different on the model names, appearance and color. So the test data of R50 can represent the remaining models.



Page 3 of 7

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## 2. General Information

#### 2.1. Test environment and mode

Item	Normal condition				
Temperature	+25°C				
Voltage	DC 3.7V				
Humidity	56%				
Atmospheric Pressure:	1008 mbar				
Test Mode:					
Transmitting Mode:	Keep the EUT in continuous transmitting by select channel				

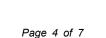
## 2.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name	
		1	1	1	

#### Note:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
- 3. For conducted measurements (Output Power, 20dB Occupied Bandwidth, Carrier Frequencies Separation, Hopping Channel Number, Dwell Time, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.





#### 3. Facilities and Accreditations

#### 3.1. Facilities

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

• FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB

**Designation Number: CN1205** 

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

A2LA-No.: 4320.01

SHENZHEN TONGCE TESTING LAB

The testing lab has been accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.

#### 3.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339





## 4. Limit

According to §1.1310, the limit is as follow,

# TABLE 1 TO § 1.1310(E)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)			
	(I) LIMITS FOR OCCUPATIONAL/CONTROLLED EXPOSURE						
0.3-3.0	614	1.63	*(100)	<i>≤</i> 6			
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	<6			
30-300	61.4	0.163	1.0	<6			
300-1,500			f/300	<6			
1,500-100,000			5	<6			
(II) LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE							
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			
300-1,500			f/1500	<30			
1,500-100,000			1.0	<30			

f = frequency in MHz. \* = Plane-wave equivalent power density.

















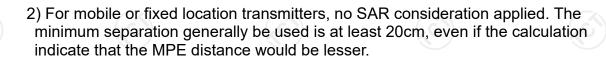


### 5. Test Results and Measurement Data

According to §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Remark: 1) For BLE: The maximum output power for antenna is 4.18dBm (2.62mW) at 2440MHz, 2.99dBi antenna gain(with 1.99 numeric antenna gain.)

**For WIFI:** The maximum output power for antenna is 12.62dBm (18.28mW) at 2437MHz, 2.99dBi antenna gain(with 1.99 numeric antenna gain.)



#### Calculation

Given

$$E = \frac{\sqrt{30 \times P \times G}}{d} \quad \& \quad S = \frac{E^2}{3770}$$

Where

E = Field Strength in Volts / meter

P = Power in Watts

G=Numeric antenna gain

d=Distance in meters

S=Power Density in milliwatts / square centimeter

Substituting the MPE safe distance using d=20cm into above equation.

Yields: S=0.000199\*P\*G

Mode	Power (dBm)	Power (mW)	numeric antenna gain	Power density (mW/cm²)	Limit (mW/cm²)	Result
BLE	4.18	2.62	1.99	0.001038	1.00	PASS
WIFI	12.62	18.28	1.99	0.007239	1.00	PASS



