

TEST REPORT

FCC ID. :	2BN8F-CAMQ50
Test Report No..... :	TCT250317E043
Date of issue..... :	Mar. 20, 2025
Testing laboratory	SHENZHEN TONGCE TESTING 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 WORKINGPORT COMMERCIAL BUILDING 3 HAU FOOK STREET TSIM SHA TSUI HONG KONG, China
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..... :	Q50, Q10, Q20, Q30, Q40, Q60, Q70, Q80, Q90, Q51, Q52, Q53, Q54, Q55, Q50 pro, Q50 plus
Rating(s)	Rechargeable Li-ion Battery DC 3.7V
Date of receipt of test item	Mar. 17, 2025
Date (s) of performance of test..... :	Mar. 17, 2025 ~ Mar. 20, 2025
Tested by (+signature) ... :	Yannie ZHONG
Check by (+signature).... :	Beryl ZHAO
Approved by (+signature):	Tomsin

General disclaimer:

This report shall not be reproduced except in full, without the written approval of SHENZHEN TONGCE TESTING LAB. This document may be altered or revised by SHENZHEN TONGCE TESTING LAB personnel only, and shall be noted in the revision section of the document. The test results in the report only apply to the tested sample.

Table of Contents

1. General Product Information	3
1.1. EUT description	3
1.2. Model(s) list.....	3
2. General Information.....	4
2.1. Test environment and mode.....	4
2.2. Description of Support Units.....	4
3. Facilities and Accreditations	5
3.1. Facilities	5
3.2. Location	5
4. Test Results and Measurement Data	6

1. General Product Information

1.1. EUT description

Product Name.....:	Wi-Fi 1080p Battery Camera with Solar Panel
Model/Type reference.....:	Q50
Sample Number.....:	TCT250317E011-0101
Operation Frequency	For BLE: 2402MHz~2480MHz For WIFI: 2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20))
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
1	Q50	☒
Other models	Q10, Q20, Q30, Q40, Q60, Q70, Q80, Q90, Q51, Q52, Q53, Q54, Q55, Q50 pro, Q50 plus	☐

Note: Q50 is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names. So the test data of Q50 can represent the remaining models.

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
/	/	/	/	/

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.

- IC - Registration No.: 10668A

SHENZHEN TONGCE TESTING LAB

CAB identifier: CN0031

The testing lab has been registered by Innovation, Science and Economic Development Canada for radio equipment testing.

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. 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 0.59dBm (1.15mW) at 2402MHz, 2.99dBi antenna gain(with 1.99 numeric antenna gain.)

For WIFI: The maximum output power for antenna is 12.93dBm (19.63mW) at 2437MHz, 2.99dBi antenna gain(with 1.99 numeric antenna gain.)

2) For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20cm, even if the calculation indicate that the MPE distance would be lesser.

Calculation

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

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 $d=20\text{cm}$ into above equation.

Yields: $S=0.000199 \times P \times G$

Mode	Power (dBm)	Power(mW)	numeric antenna gain	Power density (mW/cm ²)	Limit (mW/cm ²)	Result
BLE	0.59	1.15	1.99	0.00046	1.00	PASS
WIFI	12.93	19.63	1.99	0.00777	1.00	

*******END OF REPORT*******