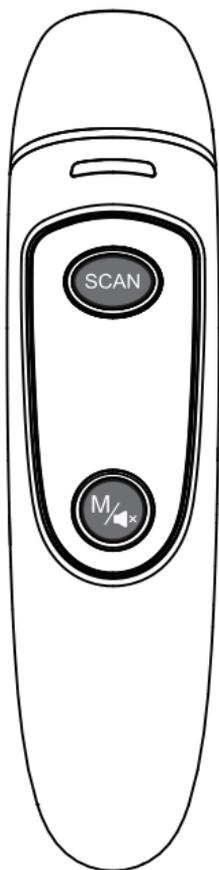


Infrared Thermometer User Manual



CE 0123

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Introduction

Thank you for purchasing this Non-contact forehead Infrared Thermometer. It has been carefully developed for accurate, safe and fast temperature measurements in the forehead.

Please read these instructions carefully before using this product and keep the instructions and the thermometer in a safe place.

Package Contents

No.	Name	Quantity
1	Infrared Thermometer	1
2	Battery (AAA, optional)	2
3	User Manual	1
4	Pouch	1

Contents

1. WARNINGS AND PRECAUTIONS.....	1
2. Product Description.....	2
1) Overview.....	2
2) Structure.....	2
3) Operating principle.....	2
4) Indications for use.....	2
3. Features.....	3
4. Product Structure.....	3
5. Display description.....	3
6. How to use your thermometer.....	4
1) Take your forehead temperature.....	4
2) Take room/object temperature.....	4
3) After a measurement.....	4
4) Read your temperature.....	5
5) Switching between mute and un-mute.....	5
6) Checking 35 sets of memory data.....	5
7) °F/°C conversion.....	5
8) Temperature compensation adjustment.....	5
9) To turn off.....	5
10) Replace the battery.....	5
7. Temperature taking tips.....	6
8. Care and cleaning.....	7
9. Error and Troubleshooting.....	8
10. Specifications.....	9
11. Symbols.....	9
12. EMC information.....	10
13. Warranty and After-Sale Service.....	13

1. WARNINGS AND PRECAUTIONS

- 1) Keep out of reach of children under 12 years.
- 2) Never immerse the thermometer into water or other liquids (not waterproof). For cleaning and disinfecting please follow the instructions in the "Care and cleaning" section.
- 3) Never use the thermometer for purposes other than those it has been intended for. Please follow the general safety precautions when using on children.
- 4) Keep the thermometer away from direct exposure to the sun and keep it in a dust-free, dry area, well-ventilated place at a temperature between 50°F (10°C)-104°F (40°C). Do not use the thermometer in high humidity environments. (>95% RH)
- 5) Do not use the thermometer if there are signs of damage on the measuring sensor or on the instrument itself. If damaged, do not attempt to repair the instrument! Please contact dealer.
- 6) This thermometer consists of high-quality precision parts. Do not drop the instrument. Protect it from severe impact and shock. Do not twist the instrument or the measuring sensor.
- 7) Please consult your doctor if you see symptoms such as unexplained irritability, vomiting, diarrhea, dehydration, changes in appetite or activity, seizure, muscle pain, shivering, stiff neck, pain when urinating, etc., even in the absence of fever.
- 8) Even in the absence of fever, those who exhibit a normal temperature may still need to receive medical attention. People who are on antibiotics, analgesics, or antipyretics should not be assessed solely on temperature readings to determine the severity of their illness.
- 9) Temperature elevation may signal a serious illness, especially in adults who are old, frail, have a weakened immune system, or neonates and infants. Please seek professional advice immediately when there is a temperature elevation and if you are taking temperature for whom are:
 - Over 60 years of age (Fever may be blunted or even absent in elderly patients)
 - Having diabetes mellitus or a weakened immune system (e.g., HIV positive, cancer, chemotherapy, chronic steroid treatment, splenectomy)
 - Bedridden (e.g., nursing home patient, stroke, chronic illness)
 - A transplant patient (e.g., liver, heart, lung, kidney)
- 10) This thermometer is not intended for pre-term babies or small-for-gestational age babies. This thermometer is not intended to interpret hypothermic temperatures. Do not allow children to take their temperatures unattended.
- 11) Use of this thermometer is not intended as a substitute for consultation with your physician or pediatrician. It is for household use only.
- 12) Clean the thermometer probe after each use.
- 13) Do not use the thermometer on newborns or for continuous temperature monitoring purposes.
- 14) Do not take a measurement while or immediately after nursing a baby.
- 15) Patients should not drink, eat, or be physically active before/while taking the measurement.
- 16) The patient is an intended operator.
- 17) Warning against servicing and maintenance while the equipment is in use
- 18) No modification is allowed for this equipment.
- 19) Warning statement that addresses the HAZARDS that can result from unauthorized modification of the equipment.
- 20) Under no circumstances should you open or repair the device yourself, as faultless functionality can no longer be guaranteed thereafter. Failure to comply will result in voiding of the warranty.
- 21) If the device is not used properly, it will cause abnormal operation. The equipment temperature is not accurate.

2. Product Description

1) Overview

Infrared Thermometer measures the body temperature based on the infrared energy emitted from the forehead. Users can quickly get measurement results after properly scanning the forehead.

Normal body temperature is a range. The following tables show that this normal range also varies by site. Therefore, readings from different site should not be directly compared. Tell your doctor what type of thermometer you used to take your temperature and on what part of the body. Also bear this in mind if you are diagnosing yourself.

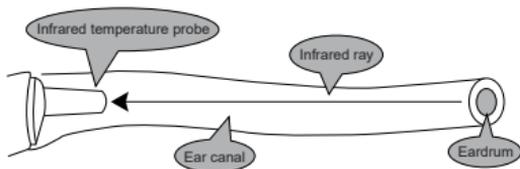
	Measurements
Forehead temperature	97.0°F to 99.5°F (36.1°C to 37.5°C)
Ear temperature	96.4°F to 100.4°F (35.8°C to 38.0°C)
Oral temperature	95.9°F to 99.5°F (35.5°C to 37.5°C)
Rectal temperature	97.9°F to 100.4°F (36.6°C to 38.0°C)
Axillary temperature	94.5°F to 99.1°F (34.7°C to 37.3°C)

2) Structure

The thermometer consists of a shell, an LCD, a measure button, a beeper, an infrared temperature sensor, and a Microprocessor.

3) Operating principle

The infrared temperature sensor collects infrared energy emitted by the skin surface. After being focused by a lens, the energy is converted into a temperature reading by the thermopiles and measurement circuits.



4) Intended for purpose

The Infrared Thermometer is intended for the measurement of human body temperatures in the home setting and medical institutes.

5) Intended User

Intended User: Both Healthcare Professional and Lay person Intended Use

Environment: Both Hospital/Healthcare Facility and Home

6) Indication

The infrared thermometer measures the infrared radiation exchange with the measured object (ear cavity or surface skin) and the appropriate correction value through the detector, and quickly outputs the body temperature. It is suitable for the use of acutely ill patients, the elderly, infants and young children.

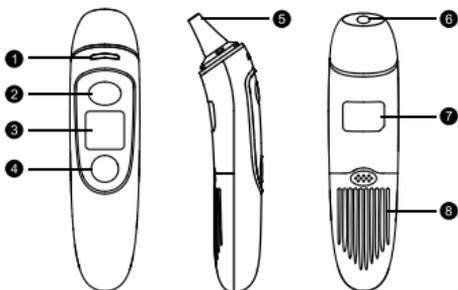
7) Contraindications

Do not use the thermometer if the ear is infected with otitis or suppuration.

3. Features

- Quick measurement, less than 1 second
- Accurate and reliable
- Easy operation, one button design
- Multi-functional, can measure forehead, room, milk, water and object temperature.
- 35 sets of memories, easy to recall
- Switching between mute and un-mute mode
- Fever alarm function, displayed in orange and red light.
- Switching between °F and °C
- Auto shut-down and power-saving

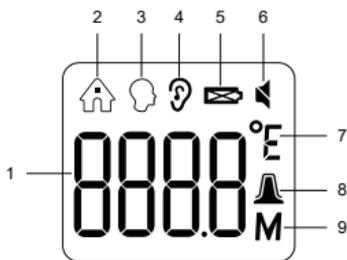
4. Product Structure



- ❶ Temperature light
- ❷ SCAN button
- ❸ LCD display screen
- ❹ Memory/Mute-unmute button
- ❺ Probe
- ❻ Probe cover (take it off when measuring ear temperature)
- ❼ Pating label
- ❽ Battery cover

5. Display description

- 1. Temperature value
- 2. Object temperature mode
- 3. Forehead temperature mode
- 4. Ear temperature mode
- 5. Battery level
- 6. Mute/Un-mute icon
- 7. Fahrenheit/Celsius degrees
- 8. Ear cover
- 9. Memory recall

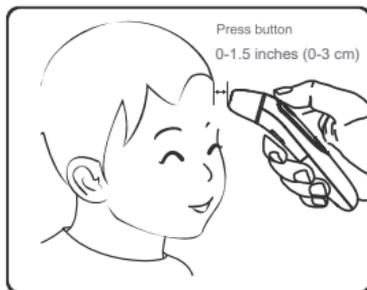


6. How to use your thermometer

When using the thermometer for the first time, please load the batteries.

1) Take your forehead temperature

Hold the thermometer within 0-1.5 inches (0-3cm) of the forehead and aim it at the center, start measuring with a short press of "SCAN" button, then you can read the value.



NOTE: The forehead measurement is an indicative reading. The measured forehead temperature can fluctuate up to 1 °F/0.5 °C from your actual body temperature. Please be aware of the factors that influence the accuracy as

described in the section "Temperature taking tips" and "WARNINGS AND PRECAUTIONS".

⚠ If the eyebrow area is covered with hair, sweat or dirt, please clean the area beforehand to improve the reading accuracy.

⚠ Always check if the lens is clean.

⚠ Always make sure the user and the thermometer will have been in the same room for at least 30 minutes prior to the measurement.

2) Take your ear temperature

Take off the probe cover, fit the probe snugly into the ear canal. Press and release the "SCAN" button in 1 second, the beep is heard, you can now read the value.

⚠ Please make sure that the ear is clean, with no earwax or obstructions.

⚠ The right ear reading may differ from the reading taken at the left ear. Therefore, always take the temperature in the same ear.



⚠ Children aged 1 year to adult: Pull the ear up and back.

⚠ Do not force the thermometer into the ear canal. Otherwise, the ear canal may get injured.

⚠ When taking the temperature on an adult, gently pull the up and back to make sure the ear canal is straight, so that the temperature probe can receive an infrared ray from the eardrum.

⚠ Be careful when taking a temperature on a child, whose ear canal is small.

3) Take room/object temperature

When the thermometer is power off, press the **Memory/Mute-unmute** button for 3 seconds until it shows . Then press the **SCAN** button to measure. Keep the thermometer about 0.4-1.2inch(1-3cm) away from the object press and release the **SCAN** button in 1 second, the beep is heard, you can now read the value.



4) After a measurement

Once the reading has been completed, remove the thermometer away from the forehead and observe temperature.

After each measurement, you can enter the recall mode and query earlier temperature readings.

 Do not hold the thermometer for a long time, because it is sensitive to the ambient temperature.

 After each measurement, clean the temperature probe with a soft cloth, and put the thermometer in a dry and well-ventilated place.

 You should wait at least 10 seconds between each measurement.

 It is dangerous to make a self-diagnosis or self-treatment based on the obtained measurement results. For such purposes, please consult a doctor.

5) Read your temperature

To indicates a temperature reading. In forehead mode.

1. If $89.6^{\circ}\text{F} \leq T \leq 99.2^{\circ}\text{F}$ ($32^{\circ}\text{C} \leq T \leq 37.3^{\circ}\text{C}$), the green light will last for 3 seconds, with one long beep.

2. If $99.3^{\circ}\text{F} \leq T \leq 100.3^{\circ}\text{F}$ ($37.4^{\circ}\text{C} \leq T \leq 37.9^{\circ}\text{C}$), the orange light will last for 3 seconds, with 3 short beeps, and the value in LCD flickers, which is a warning that you may have a light fever.

3. If $100.4^{\circ}\text{F} \leq T \leq 109.2^{\circ}\text{F}$ ($38^{\circ}\text{C} \leq T \leq 42.9^{\circ}\text{C}$), the red light will last for 3 seconds, with 5 short beeps, and the value in LCD flickers, which is a warning that you may have a high fever.

6) Switching between mute and un-mute

When the thermometer is turned on, keep pressing the **Memory/Mute-unmute** button for 2-3 seconds, to switch from un-mute to mute.

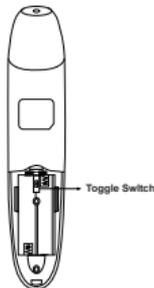


7) Checking 35 sets of memory data

When the thermometer is turned on or power off, by pressing the **Memory/Mute-unmute** button to go to the memory mode, press this button again to check the 35 sets or memories one by one, If no value, it will display "----M".

8) °F/°C conversion

Open the battery cover, use the toggle switch to change the °F/°C.



9) Temperature compensation adjustment

When the thermometer is turned on, press both the **Memory/Mute-unmute** button and **SCAN** button for 2-3 seconds to go to the temperature compensation mode. By pressing the Memory/Mute-unmute button to adjust the temperature from $\pm 0.0^{\circ}\text{C} (^{\circ}\text{F})$ to $\pm 2.0^{\circ}\text{C} (^{\circ}\text{F})$.

Note: All the future temperature you take will be automatically added the value you are adjusted.

10) To turn off

The unit will shut down automatically after 10 seconds of no use. Or you can keep pressing the **SCAN** button for 5-7 seconds.

Caution

1. All memory records will be lost when you uninstall or reinstall the battery.
2. All settings will come to default when you uninstall the battery. If you need to adjust the settings, please power on and make the new settings.

11) Replace the battery.

Slide the battery cover off along the marked direction. Put two AAA batteries correctly into the compartment.

 Remove the batteries if the thermometer will not be used for more than two months.

Disposal:

For environmental reasons, do not dispose of the device in the household waste at the end of its useful life. Dispose of the unit at a suitable local collection or recycling point.

Observe the local regulations for material disposal.

Please dispose of the device in accordance with EC Directive – WEEE (Waste Electrical and Electronic Equipment). If you have any questions, please contact the local authorities responsible for waste disposal.

Batteries must not be disposed of with household waste. As a consumer, you are required by law to re-cycle used batteries. You can recycle your old batteries at public collection points in your community or wherever batteries of the relevant type are sold.

The codes below are printed on batteries containing harmful substances:

Pb = Battery contains lead, Cd = Battery contains cadmium, Hg = Battery contains mercury

The batteries in this device do not contain any pollutants. Technical specifications:

7. Temperature taking tips

1) It is important to know each individual's normal temperature when they are well. This is the only way to accurately diagnose a fever. Record readings twice a day (early morning and late afternoon). Take the average of the two temperatures to calculate normal oral equivalent temperature. Always take the temperature in the same location, since the temperature readings may vary from different locations on the forehead.

2) A child's normal temperature can be as high as 99.9°F (37.7°C) or as low as 97.0°F (36.11°C).

Please note that this unit reads 0.9°F (0.5°C) lower than a rectal digital thermometer.

3) External factors may influence ear temperatures, including when an individual has:

- been lying on one ear or the other
- had their ears covered
- been exposed to very hot or very cold temperatures, or
- been recently swimming or bathing

In these cases, remove the individual from the situation and wait 20 minutes prior to taking a temperature.

Use the untreated ear if prescription ear drops or other ear medications have been placed in the ear canal.

4) Holding the thermometer for too long in the hand before taking a measurement can cause the device to warm up. This means the measurement could be incorrect.

5) Patients and the thermometer should stay in steady-state room condition for at least 30 minutes.

6) Before placing the thermometer sensor onto the forehead, remove dirt, hair, or sweat from the forehead area. Wait 10 minutes after cleaning before taking measurement.

7) Use an alcohol swab to carefully clean the sensor and wait for 5 minutes before taking a measurement on another patient. Wiping the forehead with a warm or cool cloth may impact your reading. It is advised to wait 10 minutes before taking a reading.

8) In the following situations it is recommended that 3-5 temperatures in the same location be taken and the highest one taken as the reading:

- Newborn infants in the first 100 days.
- Children under three years of age with a compromised immune system and for whom the presence or absence of fever is critical.
- When the user is learning how to use the thermometer for the first time until he/she has familiarized himself/herself with the instrument and obtains consistent readings.

8. Care and cleaning

1) Cleaning and user maintenance must not be performed by children unless supervised.

2) Cleaning the device use an alcohol swab or cotton swab moistened with 70% alcohol to clean the thermometer casing and the measuring probe.

3) After the alcohol has completely dried out, you can take a new measurement (minimum of 10 minutes).

4) Ensure that no liquid enters the interior of the thermometer.

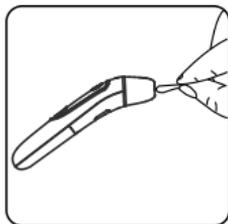
5) Never use abrasive cleaning agents, thinners or benzene for cleaning and never immerse the instrument in water or other cleaning liquids.

6) Take care not to scratch the surface of the LCD screen.

7) Remove the batteries from the device before cleaning.

8) Clean the device after use with a soft, slightly damp cloth. If they are very dirty, you can also moisten the cloth with a mild soapy solution.

9) Ensure that no water enters the device. If this happens, only use the device again once it has fully dried out



9. Error and Troubleshooting

Symptom	Possible Cause	Description & Solution
Failed to power on.	The battery level is too low.	Replace with a new battery
	Polarities of the batteries are reversed.	Ensure the batteries are in the right position
	The thermometer is damaged	Contact dealer
The reading is too low	The lens of the probe is dirty.	Clean the lens with a cotton swab.
	The distance of the item and target is too far	Keep the thermometer in contact with forehead
	You have just come from a cold environment	Stay in a warmer room for at least 30 minutes before taking a reading
The reading is too high	You have just come from a hot environment.	Stay in an adequately cool room for at least 30 minutes before taking a reading
	The ambient temperature is not in range.	3 short beeps and red indicator light 3 seconds. Take a measurement under an ambient temperature between 50.0°F(10°C) and 104°F (40°C).
	Memory Error	3 short beeps and red indicator light for 3 seconds. Contact dealer.
	In forehead mode, T > 109.2°F (42.9°C)	3 short beeps and red indicator light for 3 seconds.
	In forehead mode, T < 89.6°F (32°C)	3 short beeps and red indicator light for 3 seconds.
	$2.5V \pm 3\% \cong$ power voltage $\cong 2.6V \pm 3\%$	The battery level is low, it suggests you to replace the battery, but you can continue to use it.
	The power voltage is lower than $2.5V \pm 3\%$.	It will turn off automatically after 30 seconds. Please replace with a new battery

10. Specifications :

Product name	Infrared thermometer
Power supply	DC1.5V×2
Measurement range	Forehead: 89.6°F–109.2°F (32.0°C–42.9°C)
	Object: 32°F–212°F (0°C–100°C)
Accuracy (Laboratory)	Forehead mode ±0.4°F/±0.2°C
	Object mode ±1.8°F/±1.0°C
Display resolution	0.1°F/0.1°C
Measuring distance	0 -1.5 inches (0-3cm)
Automatic shutdown	10s±1s
Memory	35 groups of measured temperature.
Battery	2*AAA, can be used for more than 3000 times
Weight & Dimension	66g (without battery),163.3 x 39.2 x 38.9mm
Operating conditions	Operating environment: 10°C-40°C, ≤85%RH Relative Humidity: ≤85% moisture condensation Atmospheric pressure: 70 - 106kPa
Storage	Temperature: -20°C~55°C Relative Humidity: ≤95% moisture condensation Atmospheric pressure: 70 - 106kPa
Device Life	5 Years

11. Symbols:

Symbol	Description
	Type BF applied part.
	Information about a manufacturer
	Please read the instructions carefully.
	Waste electrical materials should be sent to a dedicated collection point for recycling.
SN	Serial number
LOT	Batch number
	IMPORTANT Inaccurate reading or thermometer damage may occur if the thermometer is not correctly used.
IP22	2 Protected against solid foreign objects of 12,5 mm Ø and greater; 2 If keep the thermometer in 15 degree angle, it still can prevent the water drop.
	Medical device
	Importer
	CE mark

12. EMC information

IEC 60601-1-2: 2014 ME EQUIPMENT and ME SYSTEMS identification, marking and documents for Class B product

The ME EQUIPMENT or ME SYSTEM is suitable for home healthcare environments and so on.

Warning: Don't near active HF surgical equipment and the RF shielded room of an ME system for magnetic resonance imaging, where the intensity of EM disturbances is high.

Warning: Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

Warning: Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation."

Warning: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Infra-red Thermometer (FC-IR100), including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

If any: a list of all cables and maximum lengths of cables (if applicable), transducers and other ACCESSORIES that are replaceable by the RESPONSIBLE ORGANIZATION and that are likely to affect compliance of the ME EQUIPMENT or ME SYSTEM with the requirements of Clause 7 (EMISSIONS) and Clause 8 (IMMUNITY). ACCESSORIES may be specified either generically (e.g. shielded cable, load impedance) or specifically (e.g. by MANUFACTURER and EQUIPMENT OR TYPE REFERENCE).

If any: the performance of the ME EQUIPMENT or ME SYSTEM that was determined to be ESSENTIAL PERFORMANCE and a description of what the OPERATOR can expect if the ESSENTIAL PERFORMANCE is lost or degraded due to EM DISTURBANCES (the defined term "ESSENTIAL PERFORMANCE" need not be used).

Technical description:

- 1.all necessary instructions for maintaining BASIC SAFETY and ESSENTIAL PERFORMANCE with regard to electromagnetic disturbances for the excepted service life.
2. Guidance and manufacturer's declaration -electromagnetic emissions and Immunity

Table 1

Guidance and manufacturer's declaration - electromagnetic emissions	
Emissions test	Compliance
RF emissions CISPR 11	Group 1
RF emissions CISPR 11	Class B
Harmonic emissions IEC 61000-3-2	N/A
Voltage fluctuations/ flicker emissions IEC 61000-3-3	N/A

Table 2

Guidance and manufacturer's declaration - electromagnetic Immunity		
Immunity Test	IEC 60601-1-2 Test level	Compliance level
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air
Electrical fast transient/burst IEC 61000-4-4	Power supply lines: ± 2 kV input/output lines: ± 1 kV 100 kHz repetition frequency	N/A
Surge IEC 61000-4-5	line(s) to line(s): ± 1 kV. line(s) to earth: ± 2 kV.	N/A
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% 1 cycle And 70% 25/30 cycles Single phase: at 0 0% 250 cycle	N/A
Power frequency magnetic field IEC 61000-4-8	30 A/m 50Hz/60Hz	30 A/m 50Hz/60Hz
Conducted RF IEC61000-4-6	150KHz to 80MHz: 3Vrms 6Vrms (in ISM and amateur radio bands) 80% Am at 1kHz	N/A
Radiated RF IEC61000-4-3	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz
NOTE UT is the a.c. mains voltage prior to application of the test level.		

Table 3

Guidance and manufacturer's declaration - electromagnetic Immunity							
Radiated RF IEC61000-4-3 (Test specifications for ENCL-OSURE PORT IMMUNITY to RF wireless communications equipment)	Test Frequency (MHz)	Band (MHz)	Service	Modulation	Modulation (W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)
	385	380 –390	TETRA 400	Pulse modulation 18 Hz	1,8	0.3	27
	450	430–470	GMRS 460, FRS 460	FM \pm 5 kHz deviation 1 kHz sine	2	0.3	28
	710	704 – 787	LTE Band 13, 17	Pulse modulation 217 Hz	0,2	0.3	9
	745						
	780						
	810	800 – 960	GSM 800/ 900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation 18 Hz	0,2	0.3	28
	870						
	930						
	1720	1 700 – 1 990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation 217 Hz	2	0.3	28
	1845						
	1970						
	2450	2 400 – 2 570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation 217 Hz	2	0.3	28
	5240	5 100 – 5 800	WLAN 802.11 a/n	Pulse modulation 217 Hz	0.2	0.3	9
	5500						
	5785						

13. Warranty and After-Sale Service

The device is under warranty for 12 months from the date of purchase. The batteries, the packaging, and any damage caused by improper use are not covered by the warranty.

Excluding the following user-caused failures:

- 1.Failure resulting from unauthorized disassembly and modification.
- 2.Failure resulting from an unexpected dropping during application or transportation.
- 3.Failure resulting from not following the instructions in the operating manual.

Product Name: Infrared Thermometer
Model: FC-IR100

U.S. Agent:
CTI U.S. Inc.
Suite 230,1455 Cti U.S. Inc.
Lincoln Parkway, Atlanta, Ga, 30346

  RIOMAVIX S.L.
Calle de Almansa 55, 1D, Madrid, 28039 Spain

Manufacturer:
 Shenzhen Finicare Co., Ltd
201, No.50, the 3rd Industrial Park, Houting Community,
Shajing Street, Bao'an District,
Shenzhen 518104 China
E-mail: info@finicare.com

Made in China