



Non-contact Infrared Thermometer LTH-1 User Manual

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1. Product Introduction

1.1. Product description

This product is a thermometer that uses infrared technology to measure human body temperature. It can measure human body temperature by just pointing the product at the human forehead, pressing the measurement button. The body temperature will be displayed on screen within 1 seconds. It is simple and fast.

1.2. Intended Use

This product is used for measuring heat radiation from the human forehead, it can show the body temperature of human. The product can be reused.

1.3. Composition and Structure

1. 1. 1. Non-contact infrared thermometer mainly consists of infrared sensor, distance sensor, control circuit board, display screen, operation buttons, plastic shell, probe protection cover (may not include). The schematic diagram of its structure is shown in Figure 1, and the full-screen display is shown in Figure 2.

1) Structure

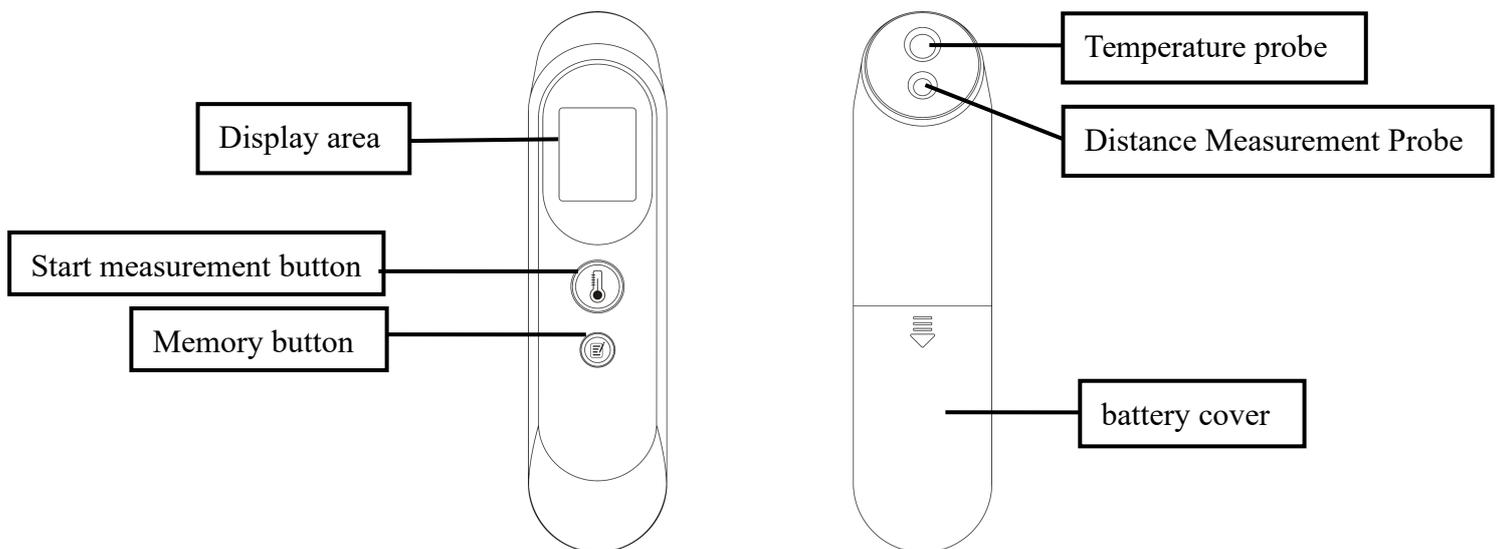


Figure 1

2) LCD screen

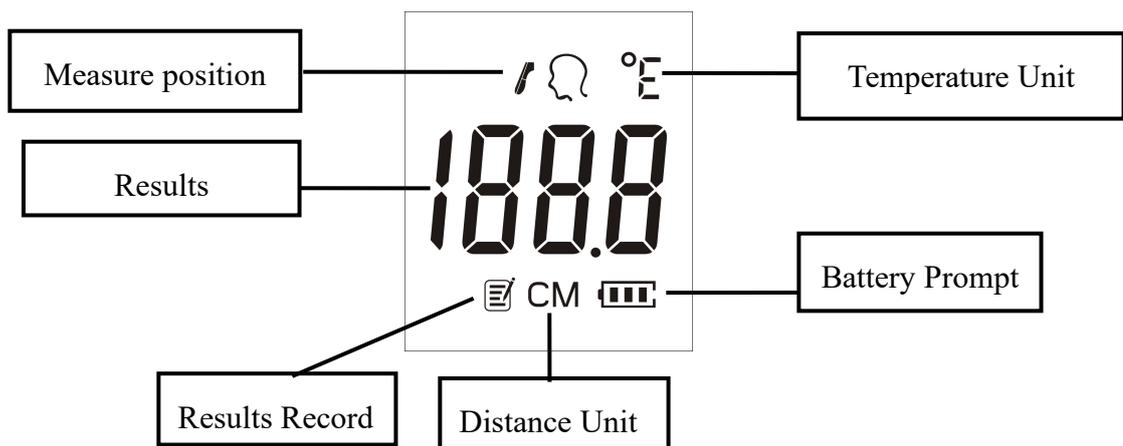


Figure2

Note: The appearance of instruments and accessories are subject to the physical product.

1.4. Working Principle

By radiating infrared energy to the human body, accurately measure human body's temperature.

1.5. Range of Application

This product is suitable for people including babies, children and adults.

1.6. Contraindications

No.

2. Technical parameters and conditions of use

2.1. Technical parameters

- Power supply: DC 3V (-10%, +5%)
- Measurement range: 32.0°C~43.0°C
- Display resolution: 0.1°C
- Measurement accuracy:
- Within 35.0°C~42.0°C±0.2°C
- ±0.3°C within the range of 32°C~34.9°C and 42.1°C~43.0°C
- Shock protection: internal power supply equipment
- Application part: BF type applied part
- Operating mode: continuous operation
- Temperature unit: Celsius °C/Fahrenheit°F

- Protection of liquid intake: IP20 (it can prevent solid foreign objects with a diameter over or equal to 12.5mm from entering, without protection against ingress)
- Safety classification: equipment that cannot be used in the presence of flammable anesthetic gas mixed with air or flammable anesthetic gas mixed with oxygen or nitrous oxide
- Product size: 148*38*45 (mm)
- Product weight: about 90g (excluding battery)
- Memory: 15 groups of results

2.2. Working, transportation and storage environment

- working environment:
 Temperature: 15°C to 40°C
 Humidity: 15% to 90% RH
 Atmospheric pressure: 70kPa~106 kPa
- Transportation and storage environment:
 Temperature: -25°C to +70°C
 Humidity: ≤90% RH
 Atmospheric pressure: 70kPa~106 kPa

3. Installation and usage

3.1 Install the battery

This machine comes with 2 pieces of AAA batteries. Push the battery cover down and insert the battery into the battery compartment. At this time, the product starts the self-test. A full-screen display, backlight, and prompt sound indicate that the self-test passed and entered the standby state. Pay attention to the positive and negative indications in the battery compartment and close the battery cover. As shown in Figure 3,

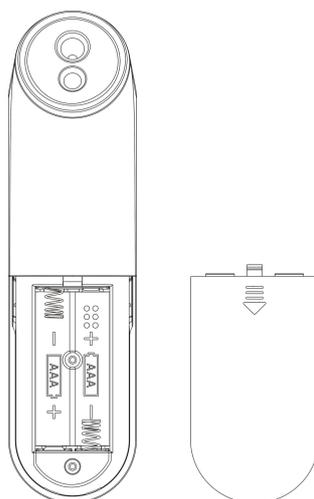


Figure 3

3.2 How to replace the battery

If the screen only displays the “”, it prompts to replace the battery. When “” is displayed, it will not turn on after the automatic shutdown, please replace the battery. Insert two new AAA (No. 7) batteries. Please pay attention to the positive and negative directions and install the battery cover. The boot screen will be normal and the battery replacement is complete. If there is no response, please check the positive and negative direction of the battery and the power.

Note: The battery with the machine is a test battery, please use new batteries when the testing institution tests.

3.3 Measurement unit setting

In the shutdown state, long press the memory key “” for 2-3 seconds to enter the temperature unit conversion state, then short press the memory key “” to select “°C” and “°F” temperature units, then press the power-on measurement key “” to exit and automatically shut down .

4. Operation method

4.1 Measuring body temperature

- In the power off state, press the power button “” to power on.
- Put the probe at the position between the eyebrows, within a distance of about 3 cm (do not touch the forehead directly).

- Press the switch measurement key “”, the medical infrared thermometer has a "di" sound prompt and displays the measurement result.

4.2 Memory function

1. Memory function: Press the “” key to check the memory values. The medical infrared thermometer stores 15 groups of readings. When the specified quantity of groups is exceeded, the latest memory value will overwrite the earliest memory value.

2. In the memory mode, long press “” to display the CLr on the screen to clear the memory value.

Note:

① When the measurement distance is over 3 cm, the screen displays "0-3", please approach forehead to measure, as shown in Figure 4

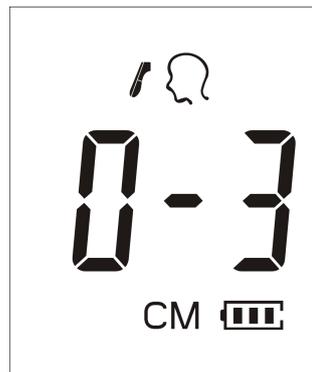


Figure 4

② When the measurement distance is less than about 3 cm, it will automatically measure, with a "di" sound, and display the measurement result

③ When the body temperature exceeds 37.5°C, the screen will be displayed in orange, and at the same time, the machine will have three rapid alarm sounds“di-di-di”.

④ When the measured value exceeds the measuring range (32°C~43°C), the screen will display in orange and white toggle 3 times, at the same time, the thermometer will appear three consecutive rapid alarm sounds“di-di-di”, please confirm the measurement method and the external environment is normal.

4.3 Shutdown

- ① Long press the start measurement key “” for 2-3 seconds to shut down.
- ② Without any operation, it will shut down automatically in about 1min.

5.Product symbol description

Table 2.Product symbol description

Symbol	Description	Symbol	Description
	Type BF applied part		Caution
	Recycle		Up
	Handle with care		Time limit for environmental concerning
	DISPOSAL: Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.		Keep dry
	Manufacture		Authorized representative in the European Community
	Serial Number		Follow Instruction for use
	CE marked product		Date of Manufacture
	Medical device		

6. For technical data, please contact



CMC Medical Devices & Drugs S.L.

Add :C/ Horacio Lengo No.18, CP 29006, Málaga, Spain

7.Maintenance

Since the product is a reusable instrument, please clean and disinfect it after use.

If the product is dirty, please keep the sensor and probe cavity clean, otherwise it will affect the measurement accuracy.

Clean the cavity of the sensor and the probe: gently wipe the cavity or the mirror surface of the sensor with a clean soft cloth or cotton swab.

Disinfect the product and its head: Use a cotton swab dipped in a little medical alcohol (75%) to gently wipe the surface of the product and the measured head. Use it after the alcohol has evaporated.

- Precautions for storage

This product should be stored in a dust-free and dry place. Please avoid direct sunlight; do not store it in a place with high temperature, humidity, dust and corrosive gas.

This product is a high-precision product, please do not drop the device! Avoid violent impacts and bumps and other possible behaviors that are not conducive to transportation.

If there are signs of damage to the sensor head or the product itself, please do not continue to use it.

When using this product, do not exceed its range of use. When using it on children, please observe the general safety precautions.

8. Common Faults and Solution

Fault phenomenon	Reason analysis	Solution
screen display “Lo”	The measuring temperature is lower than 32°C, which exceeds the measuring range of the machine	Please re-measure according to the instruction
screen display “Hi”	The measuring temperature is lower than 43°C, which exceeds the measuring range of the machine	Please re-measure according to the instruction
screen display “Err”	The ambient temperature is too low or too high	Please measure at 16°C~35°C ambient temperature
screen display “  ”	Low battery	Please replace the battery
No display or abnormal display	The battery is reversed or the machine is abnormal	Reinstall the battery, or contact your dealer

9.Warning, Precautions and Limitations

1. The measurement results are for reference only, and cannot replace the doctor's diagnosis. Self-judgment and treatment of the measurement results is very dangerous. Please follow the doctor's guidance.
2. Please put the battery out of the reach of children, otherwise it is easy to be dangerous.
3. When this product is not used for a long time (more than 3 months), please remove the battery from the compartment to prevent battery leakage.
4. It is forbidden to immerse the medical infrared thermometer in any liquid, and it is forbidden to use it under the environment of high or low temperature for a long time. It is forbidden to collide, drop or mix with sharp objects.
5. Do not put the battery close to the fire source or throw it into the fire to avoid battery explosion. Do not use when the battery is leaking or moldy; when discarding the battery or this product, you must comply with local regulations to avoid contamination.
6. This product contains sensitive electronic components. Avoid using it directly in the environment with strong electromagnetic interference (such as near mobile phones, microwave ovens, etc.) to prevent temporary impact on its accuracy.
7. Before use, please read this instruction manual carefully to confirm that the battery is installed.
8. Do not disassemble, repair or modify this product, otherwise it may cause errors in the measurement results or cause machine failure.
9. This product is not waterproof. Use it with care to prevent liquid from entering the product. When this product gets wet due to contact with steam, please wait until it becomes dry or wipe gently with a soft dry cloth or cotton ball, otherwise it will cause measurement error.
10. If there is a temperature difference between the machine storage and the measurement environment, put the machine in the use environment and let it stand for more than 30 minutes, otherwise the measurement results may have errors.
11. When the sensor lens is dirty, please wipe it with a soft dry cloth or cotton swab, and do not wipe it with other objects, otherwise it may cause the mirror surface of the sensor to be scratched or the machine malfunction.
12. Do not try to measure when the machine is wet, it may cause inaccurate measurement results.
13. Before the measurement, please make sure that the forehead of the tested person is free of sweat, cosmetics, oil stains, etc.
14. Before the measurement, please make sure that the testee has not taken a bath, exercised or dine within 30 minutes, and measured when the body is in a stable state.

15. Before use, please keep the sensor and probe cavity clean.
16. When measuring, do not face the sun, air outlet of the air conditioner or heater, which will change the temperature. Please try to measure in a stable environment.
17. Under the conditions of storage regulations, the life of the product is 5 years (except for vulnerable and consumable parts).

10.EMC Declaration

10.1 Instructions for use

The ME EQUIPMENT is suitable for home and healthcare environments

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 equipment, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

10.2 Technical description

- 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	Not applicable
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable

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	Not applicable	Not applicable
Surge IEC 61000-4-5	Not applicable	Not applicable
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	Not applicable	Not applicable
Power frequency magnetic field IEC 61000-4-8	30 A/m 50Hz/60Hz	30 A/m 50Hz/60Hz
Conducted RF IEC61000-4-6	Not applicable	Not applicable
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 ENCLOSURE 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	800–96 0	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation 18 Hz	2	0.3	28
	870						
	930						
	1720	1700 – 1990	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	2400 – 2570	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							

11.Warranty

As long as the instrument is clean, no special maintenance is generally required. If you need service or repair, please call after-sales service.

1. This product provides one-year free maintenance service. If you need to provide circuit diagrams, necessary materials and electrical circuit troubleshooting during warranty service, please contact the manufacturer.
2. For the failure caused by the following users' personal reasons, free warranty service will not be provided:
 - 1) Failure caused by unauthorized disassembly and modification.
 - 2) Failure caused by accidental drop of the product.
 - 3) Failure caused by not operating according to the instructions.
 - 4) Failure caused by lack of reasonable maintenance.
 - 5) Damage caused by external force.
3. Repair services outside the warranty will be charged according to regulations.

12.Packing List

Host: 1 set

Battery: 2 pieces of No. 7 alkaline battery

Manual: 1

Qualified Certificate: 1 piece

13.warranty card

warranty card

Model		
Serial No.		
Purchase date		
username		
contact number		
Seal of sales point		
Maintenance records	matter	Repairer
Remarks	Please show this card for repair !	

14.Contact information

Manufacturer: Guangzhou Labsim Biotech Co., Ltd



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