

# Infrared

ThermoScope

## Non-Contact Measurement

**MC-306**



**CE**  
0197

- In order to use this product safely, please read the manual before use.
- After reading, please keep it in a safe place for easy check and reference.

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Dear users:

- Thank you for purchasing the MediCare Non-Contact Infrared Thermoscope, MC-306
- Before using this product, please read the manual carefully and use it correctly.
- Please keep this manual in a safe place after reading it.
- Please keep the purchase voucher for future maintenance.

## 1. Instruction for Use and Precautions

- ⚠ Before use, please read the manual carefully and confirm that the battery has been installed.
- ⚠ Do not immerse any part of this product in water or other liquids, as it may damage the thermometer. Follow the cleaning and disinfection instructions when cleaning.
- ⚠ Non-professionals should not disassemble and repair the thermometer, which may damage the thermometer.
- ⚠ Keep the thermometer out of the reach of children to prevent them from swallowing small parts.
- ⚠ Do not leave this product in an environment with excessively high or low humidity for a long time.
- ⚠ Do not bump, drop or mix with sharp objects.
- ⚠ Do not directly touch the top of the temperature probe with your fingers.
- ⚠ Do not measure the temperature within 30 minutes after exercise, meals, and bathing. At this time, the body temperature has a large deviation from normal body temperature.
- ⚠ When the temperature of the thermometer changes greatly (such as from indoor to outdoor), please wait for about 30 minutes in the new environment before measuring.
- ⚠ It is recommended that the interval be more than 10 seconds for multiple measurements.
- ⚠ The user is not familiar with the measuring method, which may cause measuring deviation. It is recommended that users purchase this product and practice several times to become familiar with the measuring method.
- ⚠ Contraindications: No findings.

### Precautions

- ⚠ The measurement results of this product cannot replace physician diagnosis.
- ⚠ Due to individual differences, the clinical accuracy of some people has a deviation of 0.1-0.2. If the data of forehead measurement does not meet the clinical performance, please measure other parts or refer to the doctor's order.
- ⚠ Discarded batteries, please do not discard them randomly. They should be sent to a designated place for classification and treatment according to local environmental protection requirements to avoid causing pollution to the environment.
- ⚠ If it is not used for a long time (more than 2 months), please remove the battery and store it to avoid battery leakage and damage to the thermometer.
- ⚠ Precautions during use: For details, please pay attention to the description of warnings and precautions in the manual.
- ⚠ Battery interference: Do not use the machine in a strong battery interference environment.

## **2. Product Introduction**

This product measures the temperature of human body by collecting infrared thermal radiation from human forehead hair. Its operation is simple and hygienic, and the measurement is fast and accurate. Users only need to point the probe at the forehead and press the measurement button to measure the temperature of human body. It is widely used in schools, customs, hospital, family.

## **3. Safety category**

This product is an internal power supply equipment, type B application part, and the protection level is IPX0. It cannot be used in the presence of a mixture of flammable anesthetic gas and air, oxygen or nitrous oxide, and it is a continuous operation equipment.

## **4. Scope of application**

- Scope of application: Display the body temperature of the measured object by measuring the heat radiation on the forehead.
- Trial population: suitable for infants, children and adults.
- Expected use environment: The environment applicable to this product includes hospitals, clinics, infirmaries, schools, government organizations, social groups, and families.

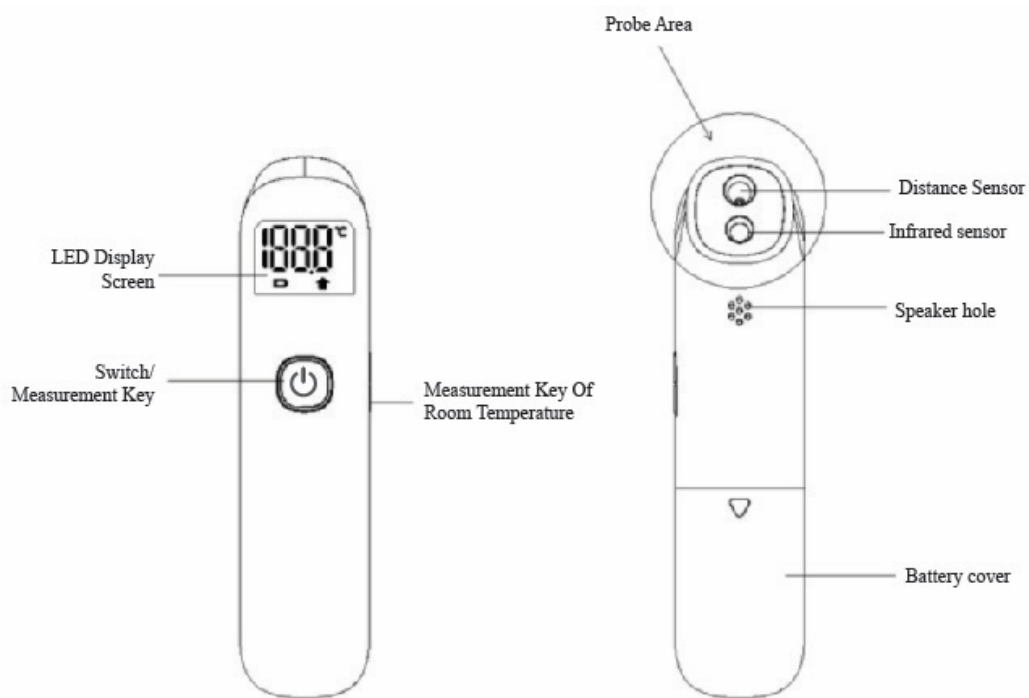
## **5. Working principle**

Any object will release infrared radiation energy, and its surface temperature directly determines the size and wavelength of the radiant energy. Based on this principle, this product uses a high-precision infrared sensor that is specially used to detect the body's infrared radiation energy with a wavelength of 5-14um. With the accurate calculation and various compensation corrections, the human body temperature can be accurately measured.

## **6. Product features**

- Use high precision infrared sensor with stable and reliable performance.
- Strong probe structure to ensure more accurate measurement.
- Heating temperature prompt.
- Ambient temperature measurement.
- Large-size digital LED screen with clear and soft display.
- Automatic shutdown saves power and energy.

## 7. Product appearance diagram

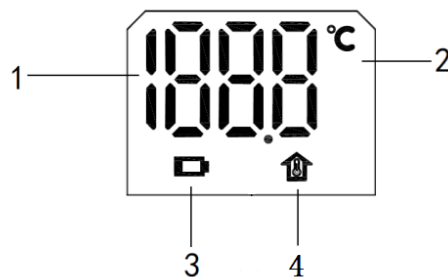


## 8. Structure and composition

This product mainly consists of infrared sensor, microprocessor, embedded software (Software release version No.:V1), memory, power supply, electro-acoustic components, LED display and housing.

Product accessories: instruction manual, warranty card, certificate of conformity.

## 9. Display icons and definitions



Definition of icon	Icon	Description of Status
Display value	1	Display value during the measurement
Temperature unit	2	Celsius

Battery status	3	Display	Battery power is low, please pay attention to replace the battery
		No display	The battery is fully charged
Environmental temperature	4	Display	Measurement mode of environmental temperature and display value is environmental temperature
		No display	Measurement mode of body temperature, and display value is body temperature

## 10. Setting operation

### 10.1 Measurement for body temperature

● Press the "Measurement/Switch" button, the thermometer will start up and carry out self check, all light segments of the LED display screen will light up briefly, and the screen display is as shown in Figure 1. After completing the self check, enter the standby mode, and the screen display is as shown in Figure 2.

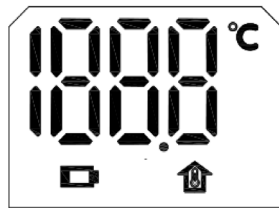


Fig.1

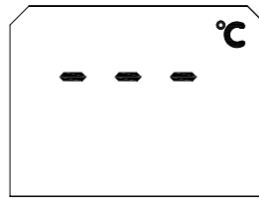


Fig.2

● Align the probe area with the forehead of the person to be measured within a suitable distance, and press the "Measurement/Switch", the thermometer will vibrate for a short time, the screen display is shown in Figure 3, and report the measurement result.

● If the distance from the probe area to the person's forehead is not appropriate, the screen display is shown in Figure 4.



Fig.3

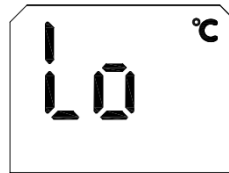


Fig.4

### 10.2 Invalid measurement prompt

- When the measured value is lower than 34.1 °C, LO is displayed (Figure 5), and send the prompt sound of "Body temperature is too low, invalid measurement";
- When the measured value is higher than 42.9 °C, HI is displayed (Figure 6), and send the prompt sound of "Body temperature is too high, invalid measurement";

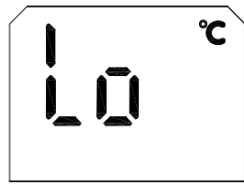


Fig.5

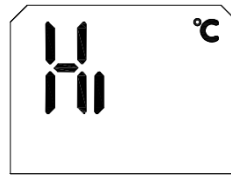


Fig.6

### 10.3 Automatic shutdown function

● After the measurement is completed, the screen displays Figure 3. If there is no key operation within 25 seconds, the thermometer will automatically shut down.

### 10.4 Environmental temperature measurement function

● After powering on, press the side button "Room Temperature" and keep pressing down. The thermometer measures the current environmental temperature. The screen display is shown in Figure 7. After the measurement is completed, the display screen is shown in Figure 8.

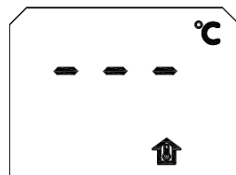


Fig. 7

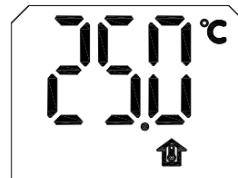


Fig. 8

### 10.5 Mode switching function

● After powering on, press the "Main Button" and keep pressing down for more than 8 seconds, and press the side button "Room Temperature", the thermometer enters the factory setting mode, the screen display is shown in Figure 11.

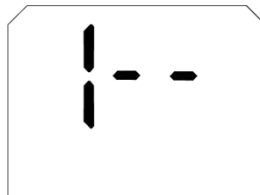


Fig.11

● **Body temperature mode setting:** press the upper part of side button to enter the 3 mode section, press the lower part of side button to adjust to the "1" section, the screen displays as shown in Figure 12, press the main button to save; continue to press the upper side button to the 7 mode section, and press the lower part of side button to adjust to the "1" section. The screen displays as shown in Figure 13, press the main button to save, press the "Main Button" and keep pressing down for more than 8 seconds and then exit.

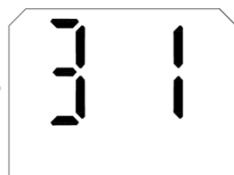


Fig.12

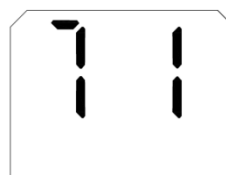


Fig.13

● **Calibration mode setting:** press the upper part of the side button to enter the 3

mode section, and press the lower part of the side button to adjust to the "0" section. The screen displays as shown in Figure 14 and press the main button to save; continue to press the upper part of the side button to 7 mode section, then press the lower part of the side button to adjust to the "0" section, the screen displays as shown in Figure 15, press the main button to save, press the "main button" and keep pressing down for more than 8 seconds and then exit.

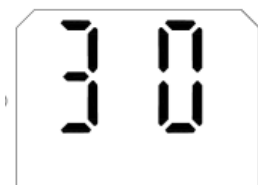


Fig.14



Fig.15

- The mode switching function should be carried out under professional guidance. For the statistical algorithm of body temperature mode, please consult our after-sales department.

## 11 Measuring method

11.1 Before and after use, please keep the inner cavity of the sensor and probe clean.

11.2 Please use the thermometer in a suitable temperature environment. When the ambient temperature of the thermometer changes greatly (such as from indoor to outdoor), please put the thermometer in the new environment for about 30 minutes before measuring.

11.3 When the measurement object comes from a place with a large difference in temperature from the measurement environment, the measurement object should stay in the test environment for at least 5 minutes.

11.4 Try not to measure with forehead blowing, water dripping, sweating, applying cosmetics, etc. Do not measure temperature within 30 minutes after exercising, bathing, and eating.

11.5 Do not use this product in direct sunlight.

## 12. Installation and replacement for battery

- When using for the first time, please open the battery cover, put in two new AAA (7#) batteries, install them in the battery compartment correctly according to the polarity of the positive and negative poles, and close the battery cover.

- When the screen displays as shown in Figure 16, it means that the battery has been already in a low voltage state, but it can still meet the measurement. It is recommended to replace the battery as soon as possible; if the screen displays as shown in Figure 17, the thermometer will automatically shut down, and please replace the battery before use.



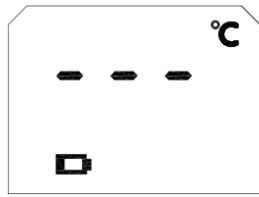


Fig.16

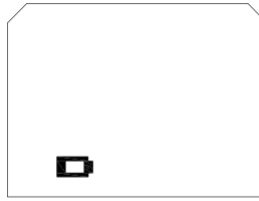


Fig.17



Tips:

Do not install the wrong positive and negative batteries.

Please use the specified battery, non-rechargeable battery cannot be charged.

Remove the dry batteries when it is not used for a long time (more than 2 months). Do not mix new and old batteries and different types of batteries.

Replace the old battery, please dispose of it according to local regulations.

### 13.Maintenance

Please keep the internal cavity of sensor and probe clean, otherwise it will affect the measurement accuracy.

Cleaning method:

12.1.Clean the surface.Use a clean soft cloth or cotton stick with a little medical alcohol or water to wipe the dirt.

12.2 Clean the inner cavity of the sensor and probe: Wipe the inner cavity of the probe or the top of the sensor gently with a clean soft cloth or cotton stick with a little medical alcohol. Use it after the alcohol has completely evaporated.

12.3 No special maintenance is required during use, please contact the seller or manufacturer if there is a failure.

Please dispose of the waste and residue at the end of the service life of the product according to the local laws and regulations

### 14. Special storage and transportation condition

Storage and transportation environment

Temperature: -20°C ~+40°C

Relative humidity: 10%RH~80%RH

Atmospheric pressure:70kPa~106kPa

During transportation, avoid throwing, heavy pressure, stepping and rain, and the outer box should be placed with direction signs. The thermometer is allowed to use general transportation means, but it must be prevented from being placed upside down during the process of severe shock, vibration and rain and snow splashing. The packaged thermometer should be stored in a well-ventilated room free of strong sunlight, non-corrosive gases.

## 15.Troubleshooting

Description of faults	Solutions
Inaccurate measurement	<p>1.Check the measurement object. The measurement performance cannot be guaranteed in the case of forehead blowing, water dripping, sweating, applying cosmetics, and applying antipyretic paste;</p> <p>2. Check the operating environment. Environmental changes have a greater impact on the measurement. If the environmental temperature changes too much, or the instrument has just measured the temperature of an ultra-high object and directly converted to the measurement of a low-temperature object, the measurement difference will occur. Leave it for about 10 minutes to obtain a new test heat balance before using it;</p> <p>3.The best operating environment of the product is 16 °C -35°C , check whether the current environmental temperature is too low or too high.</p> <p>4.Check the distance of measurement (3-5cm).</p>
Screen displays "LO" or "HI"	<p>1.The temperature of the tested object is lower than 34.1°C, the screen displays LO;</p> <p>2. The temperature of the tested object is higher than 42.9°C, the screen displays HI;</p> <p>3.Check whether the internal parameter settings are disordered.</p>
No response to button	Reload the battery.
No display or display abnormally	Reload the battery.
Shut down immediately after power on	Check whether the battery power is sufficient or replace the battery.

## 16. Technical Specification

Measuring method	Non-contact type	
Display range	34.5°C~42.9°C	
Measuring time	<6S	
Maximum allowable error	Temperature display range	Maximum allowable error
	35.0°C~42.0°C	±0.2°C
	>42.0°C, <35.0°C	±0.3°C
Resolution	0.1°C	
Operating environment	16 °C ~ 35 °C; humidity ≤85% non-condensing	
Power supply	dc3.0V (2 AAA 7# batteries)	
Power capacity prompt	Low battery prompt	
Display unit	Celsius (° C)	
Automatic shut-down	Do not use automatic shutdown within 25 seconds	
Size	146 X 35 X 41 (mm)	
Weight	68g	
Classification by type of protection against electric shock	Internal power supply equipment	
Classification by degree of protection against electric shock	B-type application part	
Classification according to the degree of protection for liquid inlet	No liquid inlet protection	
Classification by operating mode	Continuous operation	
Whether it is an AP/APG device	No	
Classification by disinfection method	See the manual	
Electromagnetic compatibility is classified by GB4824-2013	Class B, Group I	
Whether the equipment is permanently installed	Non-permanently installed equipment	







### 17. Names and contents of toxic and hazardous substances or elements:



Part Name	Toxic and hazardous substances or elements					
	Lead (Pb)	HG (Hg)	Cadmium (Cd)	Hexavalent chromium [Cr (VI)]	Polybrominated biphenyls PBB	Polybrominated diphenyl ethers (PBDE)
Housing	○	○	○	○	○	○
Probe bushing	○	○	○	○	○	○
Display screen	○	○	○	○	○	○
Main board	○	○	○	○	○	○
Packing box	×	○	○	○	○	○
Instruction manual	×	○	○	○	○	○

○: indicates that the content of this toxic and hazardous substance in all homogeneous materials of this part is below the limit requirement specified in SJ / T11363-2006.

×: indicates that the content of this toxic and hazardous substance in at least one homogeneous material of the part exceeds the limit requirement specified in SJ / T11363-2006.

### 18. Explanation of graphic and symbol

	Pay attention to the warning, refer to the attached document
	Fragile articles
	Upward
	Fear of rain
	Stacking layer limit
	The temperature range that the package should be kept




	means type B application part
	Send to designated place for processing
	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 10px;">EC REP</div> <p>CMC Medical Devices &amp; Drugs S.L. C/Horacio Lengo 18 CP 29006 Málaga Spain www.cmcmedicaldevices.com</p> </div>

## 19. Quality commitment and after-sales service

This product has a service life of 5 years and provides one year of free repair service.  
Note: Any failure caused by the user's personal reasons or any damage caused by unauthorized dis-assembly will not provide a free repair period.

Tip:

Please keep your purchase voucher for future maintenance.

 <p><b>L-Tac Medicare Pte Ltd</b> 25 Mandai Estate #07-11 Innovation Place Tower 1 Singapore 72993 Fax: (65) 6863 8190 e-mail: medicare@l-tac.net www.medicare-l-tac.com.sg</p>	<p>Distributor:</p>	
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 10px;">EC REP</div> <p>CMC Medical Devices &amp; Drugs S.L. C/Horacio Lengo 18 CP 29006 Málaga Spain www.cmcmedicaldevices.com</p> </div>	<p><b>Customer Service:</b> <b>(65) 63342273</b></p>	
<p>EN ISO 13485 : 2016</p>	<div style="display: flex; justify-content: center; gap: 10px;">    </div>	