FDA CE 0482

Forehead Thermometer

Instruction manual

Introduction

Thank you for choosing the NON-contact Digital Infrared Forehead Thermometer , Forehead Thermometer for short.

With the unique technology, the forehead thermometer can give the result with non-contact, stable measurement and without the interference from ambient temperature. The product will self-test every time it starts up to make sure the normal operation and accuracy.

The forehead thermometer can be used to measure the body temperature, which is suitable for people of all ages. It can be used to measure the temperature of milk as well.

Please read the instructions carefully before using the product, and put it in a safe and secure place for reference.

19.Accuracy for clinical test	The maximum allowable error for clinical test is specified in the formula below: $Terror = \frac{\lvert T1\text{-}Tref \rvert + \lvert T2\text{-}Tref \rvert}{2}$ ≦0.3℃/0.6℉ (for 95%) Among which: T1 and T2 represent temperature value for thermometer under test respectively, Tref represents the constant reference temperature

※It is recommended that the professional users apply technical inspection once every two years in accordance with Medical Products User Law

8.After-sale service

The device is under warranty for two years since the date of acquisition. Application for repairing should be presented during the warranty period. The damage caused by improper use is not under warranty scope. Batteries and packaging are not under warranty scope as well.

9.Security type

The signal indicates that the thermometer is a BF type device with internal power supply.

10.Authorized European Representative:

Wellkang Ltd
Suite B, 29Harley Street, LONDON, W1G9QR,U.K.

7.Abnormal state display	LCD displays “L ℃” if the measured temperature is below the minimum of measurement range. LCD displays “H ℃” if the measured temperature is below the minimum of measurement range. LCD displays “Er1”if the temperature measurement circuit is abnormal (fault of SENSOR or the temperature measurement circuit), or the ambient temperature exceed 10℃~40℃(50℉-104℉). There shall be “ErC” if the calibration process is not completed or EEPROM is abnormal.
8.Sound and backlit	volume≧50 db (the perpendicular distance from dB Volume sensor to thermometer is 10cm) Two kinds of backlist: red and green Forehead temperature mode: 1.There shall be one long beep and green backlit for 3seconds when the temperature is between 32.0℃/89.6℉ to 37.6℃/99.6℉. 2.There shall be seven short beeps and red backlit for 3 seconds when the temperature is between 37.6℃/99.6℉ to 42.2℃/107.9℉. Milk temperature mode: 1. There shall be one long beep and green backlit for 3seconds when the temperature is between 0.0℃/32.0℉ to 100.0℃/212.0℉.
9.Automatic shutdown function	10s±1s
10.Low-voltage display function	The product shall display low-voltage signal if the voltage is below 2.61V±0.15V.
11.Memory function	Memorize 20 groups of measured temperature.
12.Current consumption	$I_{stand\text{-}by}$<2μA; $I_{working}$<0.5mA; $I_{Buzzer\ on}$<2mA； $I_{banklight}$<15mA
13.LED backlit specifications	Red≧1.2cd/m^2 Green≧2.0cd/m^2
15.Operational conditions	ASTM 10℃-40℃ (50℉-104℉)/15-95%RH
16.Type of measuing	Applicable for forehead temperature and milk temperature
17.battery	Changeable for two 1.5V triple A batteries
18.Battery life	More than 1000 times

Contents

1.The advantages of Forehead Thermometer

Multiple use(measurement of body temperature and milk temperature)
Forehead Thermometer provides measurement of body temperature, which is from 32℃ to 42.2℃(from 89.6℉ to 107.9℉) , and milk temperature, which is from 0℃ to 100.0℃ （from 32.0℉ to 212.0℉）.
The product consists of ABS common plastics, TPR plastics, temperature sensor, Infrared temperature measuring element, microcomputer controlled circuit and LCD.

Convenient for use

●Special ergonomic design for easy use
●No interference for your normal life. Available for measurements during children's sleep
●Comfortable compared with anus thermometers for children, and more rapid and simple compared with mouth thermometers and more flexible compared with contact forehead thermometer.
Read multiple group of memory data
The user can read 20 groups of memory data by choosing memory mode, which is effective for tracing the change of temperature.

Safe and hygienic

●No-contact measurement won't bring about the accumulation of bacteria, and it doesn't need to be clean on purpose practically.
●There is no danger of breaking the glass or swallowing the hydrargyrum
●It is totally safe for children to use.

Fever warning

When the readings exceed 37.5℃/99.5℉, the product shall warn patients that he/she may have a fever by 7 rapid, short rings and red backlit.(For normal body temperature, the signal are long ring and green backlit)
Extensive clinical data of hospital
The cooperation with designated hospitals is subjected to precise clinical verification, with the support of extensive clinical data and professional medical experts.

2.Necessary safety instructions

●Operating Conditions:
Temperature: 10°C to 40°C
Humidity: <80% RH, non-condensing
Atmospheric pressure: 860hPa to 1060hPa
●Storage and Shipping Conditions:
Temperature: -10°C to 60°C
Humidity: 0 - 95% RH, non-condensing

	It shall display "ErC" if there is EEPROM data reading error or the correcting process is not finished.Please contact your supplier.	3 short tick and red backlit for 3seconds.
	There shall be low-voltage signal(no twinkling) when the battery voltage is below2.61V±2%.Please replace the battery.	silence
Power Off Mode		
In any mode,if no operation for 10 seconds,it will power off automatically.		

Attention:

●Electromagnetic interference: the device contains sensitive electronic component and shall not use under the condition with electromagnetic interference,(such as the place nearby the mobile phones and microwaves)
●Please dispose the used products and batteries in accordance with local regulation requirements when the products and batteries are not available.
●Please take out the battery if the device unused for long time.

7.Technical specifications

Items	Standards
models	Forehead thermometer the device
1.Applicable regulations and laws	ASTM 1965 GB/T 19146-2010
2.Temperature units	℃/℉, adjustable
3.Measurement range	Forehead temperature mode:32.0℃-42.2℃ / 89.6°F – 107.9 °F Milk temperature mode:0.0℃-100.0℃ /32.0°F – 212.0 °F
4.Precision	±0.2℃ /±0.4°F
5.Display resolution	0.1℃/0.1℉
6.Latency Time	1 second

L ℃	1. The measured value exceeds 0℃/32.0℉ under milk temperature mode. 2. The measured value exceeds 32℃/89.6℉ Under forehead temperature mode.	3 short tick and red backlit for 3seconds.

Inquiry for memory data, Storing 20 groups of data

LCD display	Operational method and instruction for displays	Sound and backlit
- - - M	Click button (3) for 4-8seconds and LCD displays "- - -" with M signal twinkling.	silence
6 M 36.8 M℃	Click button (3) again and the LCD displays the first data group with M signal twinkling. Click button (3) and it shall display the serial number for 1 second and then display the measured data. There are 20 groups of data. Mark:The memory is forehead data only.	silence
- - - M	The LCD shall only display "- - -", ℃/℉ and M signal with M signal twinkling if there is no test data.	silence

C/F conversion

LCD display	Operational steps	Sound and backlit
- - - ℃ - - - ℉	Press button (3) for 8-12seconds under shutdown state, and the temperature unit shifts automatically. Press button (3) within 5 seconds after release, and the temperature unit shifts again unless the release time exceeds 5 second. The products shall be automatic startup and enter into the milk temperature mode.	silence

Error message

Er 1	It shall display "Er1" when ambient temperature exceeds 40.0℃/104℉ or drop below 10.0℃/50.0℉.	3 short tick and red backlit for 3seconds.

Atmospheric pressure: 860hPa to 1060hPa

●The device is not used for newborn baby.

●The device is not continuous monitoring device.

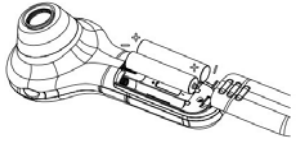
●the device is not waterproof. Please do not douse it into the water or other liquids. Cleaning and disinfection procedure shall be in comply with the instructions specified in [cleaning and storage]

●Please do not use the product if the temperature sensor or the forehead thermometer shows any sign of damage. Do not try to repair the product if it is damaged. Please contact the nearest Customer Service.

●the device consists of precision parts with high quality. Please prevent the product from falling off. Protection shall be provided for no intense shock and vibration. Do not twist the forehead thermometer and the temperature sensor.

●Battery Installation:

1. Put the two AAA batteries into battery compartment in correct polarities.
2. Push the battery cover horizontally along the arrow .



Notes:

✧ If you are the first time using the thermometer, please pull out the Plastic sheet .

✧ Battery polarities should be correctly installed. Otherwise, damage may be caused to the device.

✧ Please put in or remove batteries in right order, or may cause damage to the device bracket.

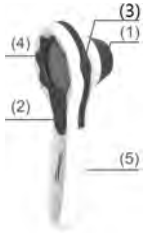
✧ Please remove the batteries if the thermometer will not be used for a long time.

Warnings

●Please put the forehead thermometer out of children's reach

●Medical assistance can't be replaced by the use of infrared forehead thermometer

●The forehead thermometer is not waterproof! Do not douse into liquid.



3.Instructions for product designs

(1)Temperature sensor

(2) Press button for measuring body temperature

(3) Press button for measuring milk temperature

(4) LCD display screen
(5) Battery cover

4.How to measure the forehead temperature
the device measures the infrared energy emitted from forehead, which will focus through lens and convert to temperature value by thermopile and measuring circuit. It is recommended that you press button (2) and scan the forehead from one side to another at a distance from 1cm to 6cm, then release the button with the maximum value displayed. Fixed point measurement may result in error diagnosis.

5.How to measure the milk temperature
the device measures the infrared energy emitted from feeding bottle, and it shall display the milk temperature by transition calculation and emission rate compensation. Please use the press button (3) for startup when measuring.

In order to avoid the inaccuracy:
●Please make sure that there is no dirt in on the temperature sensor
●Please make sure that there is no intense emotion and movement before measuring. There shall be no water on the forehead.
●If the device is transferred from one condition to another which has different ambient temperature, it is suggested to deposit for more than 30minutes.
●Do not hold the device for long time as it is highly sensitive to heat.
the device has undergone clinical test, it is safe and accurate when using in accordance with operation manual.

6.Instructions for display and operation

LCD display	Operational method and instruction for displays	Sound and backlit
	1.Measurement of body temperature 1.Aim the temperature sensor (1) at the measurer's forehead directly (effective distance from 1 to 6 cm) under shutdown state, and press button (2) or hold down button (2), it shall display measured value when releasing button, which is under forehead temperature mode. Holding down the button and scanning over the forehead are suggested. The system will read sequentially and record the maximum 2.Measurement of milk temperature Press button (3) within 4 seconds and release it under shutdown state. It shall display measured value, which is under milk temperature mode. 3.Press button (2) or (3) under startup mode and enter measurement mode again. Attention: There shall be 7 short rapid ticks when the measured temperature exceed 37.5℃/99.5℉, which is a warning for patients that he/she may have a fever	Forehead temperature mode" 1.When temperature value is between32.0℃/89.6℉ and 37.6℃/99.6℉,there shall be one long ring and green backlit for 3second. 2.When temperature value is between37.6℃/99.6℉ to 42.2℃/107.9℉, there shall be 7 short ticks and red backlit for 3seconds Milk temperature mode 1.When the temperature value is between 0.0℃/32.0℉ to 100.0℃/212.0℉, there shall be a long tick and green backlit for 3senconds.
 or 	There shall be signal for relative mode under measurement preparedness. The ℃ or ℉ signal shall twinkle. If the measurer presses button(2) or (3) again, the measurement mode is available.	
	1.The measured value exceeds 100℃/212.0℉ under milk temperature mode. 2.The measured value exceeds 42.2℃/107.9℉ Under forehead temperature mode.	3 short tick and red backlit for 3seconds.