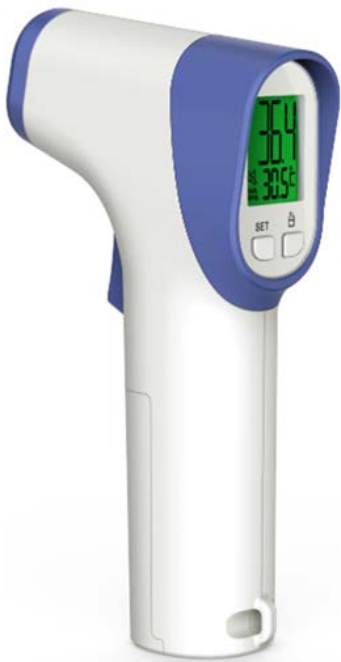
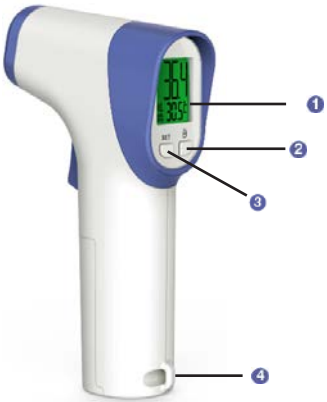
Non-Contact Thermometer



FR1MZ1-B



1. LCD screen
2. Mode Button
3. SET Button
4. Hook & 1/4" Screw Hole
5. Power and Temperature Button
6. Battery door

Read the instructions carefully before using this device.

Type BF applied part

This thermometer is a high quality product incorporating the latest technology and tested in accordance with international standards. With its unique technology, this device can provide a stable, heat-interference-free reading with each measurement. The device performs a self-test every time it is switched on to always guarantee the specified accuracy of any measurement. This thermometer is intended for measurement and monitoring not only the temperature of forehead of human body, but also the temperature of object.
This thermometer has been clinically tested and proven to be safe and accurate when used in accordance to the operating instruction manual.
Please read through these instructions carefully in order for you to understand all functions and safety information.

Intended use and contraindications
This forehead thermometer is an handheld, battery-powered, infrared thermometer intended for intermittent measurement of human body temperature in home-use environment on people of all ages, except pre-term and small-for-gestational-age babies.
These thermometers are not intended for clinical use in a professional environment and are for home usage only. This thermometer is not intended to interpret hypothermic temperatures.

WARNINGS AND PRECAUTIONS

Keep out of reach of children under 12 years. Do not allow children to take their temperatures unattended; some parts are small enough to be swallowed. Never use the thermometer for purposes other than those it has been intended for. Please follow the general safety precautions when using on children.
Never immerse the thermometer into water or other liquids (not waterproof, IP22 only). for cleaning and disinfecting please follow the instructions in “Care

and cleaning' section.

Do not store this thermometer in temperature extremes below -13 ℉ or over 131 ℉ (below -25℃ or over 55℃) or excessive humidity (above 95% non-condensing relative humidity)

Patients and thermometer should stay in similar room condition for at least 30 minutes. Always take the temperature in the same location, since temperature readings may vary according to locations.

Don't take a measurement while or immediately after nursing a baby. Patients should not drink, eat or exercise before/while taking the measurement.

Do not use the thermometer if there are signs of damage on scanner or on the thermometer itself. If damaged, do not attempt to repair the product.

Never scratch the sensor with a sharp object when cleaning.

The measurement results given by this device is not a diagnosis. It is not replacing the need for the consultation of a physician, especially if not matching the patient's symptoms.

Do not rely on the measurement result only; always consider other potentially occurring symptoms and the patient's feedback. Calling a doctor or an ambulance is advised if needed. Please consult your doctor if you see symptoms such as unexplained irritability, vomiting, diarrhea, dehydration, changed in appetite or activity, seizure, muscle pain, shivering, stiff neck, pain when urinating, etc., even in the absence of fever.

Do not modify this equipment without the authorization of the manufacturer.

Don't move the measurement device from the measuring area before hearing the termination beep.

Doctors recommend rectal measurement for newborn infants with in the first 6months, as all other measuring methods might lead to ambiguous results. If using a non-contact thermometer on those infants, we always recommend verifying the readings with a rectal measurement.

In the following situations it is recommended that three temperatures are taken with the highest one taken as the reading:

1. Children under three years of age with a compromised immune system and for whom the presence or absence of fever is critical.
2. When the user is learning how to use the thermometer for the first time until he/she has familiarized himself/herself with the device and obtains consistent readings.
3. If the measurement is surprisingly low.

Do not use this device close to strong electromagnetic fields such as mobile telephones or radio installations. Keep a minimum distance of 3.3 m from

such devices when using this device.

- Protect it from:
  - -extreme temperatures
  - -impact and dropping
  - -contamination and dust
  - -direct sunlight
  - -heat and cold
- If the Device is not going to be used for prolonged the batteries should be removed.

Why use the thermometer?

Measurement in 1 seconds

The innovative infrared technology allows the measurement without even touching the object. This guarantees safe and sanitary measurements within seconds.

Multiple uses (wide range of measurement)

This thermometer offers a wide range of measurement from 32.2 ℉ -211.8 ℉ / 0.1℃ -99.9℃, meaning the unit can be used to measure body temperature or it also has a feature allowing it to be used to measure surface temperature of the following examples:

- Milk surface temperature in a baby's bottle
- Surface temperature of a baby's bath

Accurate and reliable

The unique probe assembly construction incorporates an advanced infrared sensor, ensuring that each measurement is accurate and reliable.

Gentle and easy to use

- The ergonomic design enables simple and easy use of the thermometer.
- This thermometer can even be used on a sleeping child without causing any interruption.
- This thermometer is quick, therefore child-friendly.

Safe and hygienic

- No direct skin contact.
- No risk of broken glass or mercury ingestion.
- Completely safe for use on children.

Fever alarm

10 short beeps with a red LCD backlight for 5 seconds the patient that he/ she may have a temperature equal to or higher than 99.5 ℉ / 37.5℃ .

Auto-display memory

The last reading is automatically displayed for 1 second when the unit is switched on.

How this Thermometer measures Temperature

This thermometer measures infrared energy radiated from the forehead as well as objects. This energy is collected through the lens and converted to a temperature value.

The thermometer has been clinically test and proven to be safe and accurate when used in accordance with its operating instruction manual.

How to use?

First time use

Remove battery insulator.

Remove protect film from display.

1.Power on

Press the Power button, the display is activated to show all segments for 1 second. The default mode is body mode. Last memory shows for 1sec with 1 short beep when the device is ready to measure.

2.Ready

When the display flashes alternatively" on screen and blue tracking light activates, it's ready to take measurement.

3. Take measurement

(a). Point the thermometer at the center of the forehead with a distance no more than 2inches (5cm).

(b). Press the "power and temperature button" and ensure that the activated blue tracking light is aimed at the center of the forehead. After 1 second a long beep will verify the completion of measurement.

(c). The result will be shown on screen for 5 seconds.

(d). The unit is ready for the next measurement after the reading has shown for 5 seconds or press the Power button again to return to the ready mode if the next measurement is desired to be taken within 5 seconds. (Note: The unit is ready for the next measurement when blue tracking light activates)

(e). To take the next measurement, wait until the blue tracking light activates and repeat Step (a). above to continue the measurement.

4. To turn off

Press the Power button for 3 seconds. To conserve battery power, the unit will automatically shut down after 30 seconds for no use.

5. Low battery indicator:

When the unit is turned on, the «battery» icon keeps flashing with device still working to remind the user to replace the batteries. Once the icon shows continuously for 5 seconds, the unit will turn off automatically.

Memory mode

The thermometer includes a memory feature to recall the last temperature reading. The last temperature taken is stored in its memory and will be automatically display for 1 second when it is turn on.

Temperature unit and mute function conversion

At any status, press "SET "button for 3 seconds, the unit will enter beeper on/off and °C/°F setting.

Mute function

1.The screen will show and flash or indicating "beeper on/off" setting.

2.When flashes, press the mode button "" to jump to

3. Press mode button "" again to jump to , indicating beeper off. Press the "SET" button to select.

4. °C and °F function

1. After "beeper on/off" setting finishes then automatically goes to"C/F" setting mode.
2. When °F flashing, Press "mode" button to jump to °C display.
3. Press mode button "" again jump to °F display and °F flashing. Press "SET" button to select °F.
4. Press SET button "" go back to "beeper on/off" setting and repeat the conversion operation.
5. Once all the setting were confirmed press the "Power" button back to ready mode.

Object mode

1.Ready

The unit default setting is body mode, to measure object or the ambient temperature, press the mode button "" to switch to object mode when unit is ON and at stand-by mode. The display will be displayed "" icon on screen, it means it is on Object Mode.

(Press "" icon again to switch back to body mode to take body temperature)

2.Take measurement

When the displays flashes alternatively"" on screen, it's ready to take measurement.

(a). Point the unit at the object with 5 cm distance away from the object surface.

(b). Press the Power button.

(c). It will take 1 second to take the measurement with 1 short beep.

(d).The result will be displayed on screen for 5 seconds.

(e).To take the next measurement, press the Power button and the unit (°C or °F) flashes. Repeat Step (a). above to continue the measurement.

Note: Ambient temperature can be obtained on screen when the unit is ON/ No additional button or operation is required.

Bluetooth® Function

This device can be used in conjunction with a smartphone running the «Microlife Connected Health+» App. The measurement results will be automatically transferred via Bluetooth®.

Downloading the «Microlife Connected Health+» App

Download «Microlife Connected Health+» App for free from Google Play™ (Android) or App Store (iOS) and install it on your smartphone

How the Bluetooth® Function works

The Bluetooth® function on your device will automatically turn on and will be ready to connect with the «Microlife Connected Health+» App after the device is switched on. Your device will automatically upload the data once it is connected to the smartphone.

Bluetooth® Icon Indicator

The Bluetooth® icon indicator on your device, located in the middle left portion of the display, is designed to provide information about the connection between your device and smartphone.

NOTE:

The Bluetooth® function is enabled: The Bluetooth® icon indicator appears steady on the display.

The Bluetooth® icon indicator flashes, when connecting with a device or uploading data to the device.

The Bluetooth® function is automatically switched off during measurement; after measurement the device will switch it on and upload the data to the «Microlife Connected Health+» App.

App Tutorial

To access the tutorial, select «Tutorial» in the menu of the «Microlife Connected Health+» App (located in the upper left corner on the screen).

NOTES

The Bluetooth® of this thermometer is a medical device data system (MDDS) as its only function is for records and no additional functions. It does not modify the data or modify the display of the data, and it does not by itself control the functions or parameters of any other medical device. It is not active when the thermometer is recording data or during measurement. The thermometer will not sound any alarm with or without Bluetooth®. The Bluetooth® is used only to transfer data from point A to point B. The App on your smart devices cannot be used to start or stop the thermometer, nor update the firmware of thermometer via Bluetooth®.

Wireless communication interference

This product operates in an unlicensed ISM band at 2.4 GHz. In the event this product is used near other wireless devices such as microwave and wireless LAN, which operate on the same frequency band as this product, there is a possibility that interference may occur. If interference occurs, stop the operation of the other devices or relocate this product away from other wireless devices before attempting to use it

Error Messages

- **Measured temperature too high:** Displays «H» when measured temperature is higher than 109.4°F/43°C in body mode or measured temperature higher than 211.8°F/99.9°C in object mode with 3 short beeps and red backlight. The device switches automatically into the ready for measurement mode after 5 seconds.

- **Measured temperature too low:** Displays «L» when measured temperature is lower than 93.2 °F / 34.0°C in body mode or measured temperature lower than 32.2 °F /0.1 °C in object mode with 3 short beeps and red backlight. The device switches automatically into the ready for measurement mode after 5 seconds.

- **Ambient temperature too high:** Displays «AH» when ambient temperature is higher than 104.0 °F/ 40.0 °C in body mode and object mode with 3 short beeps with red backlight for 5 seconds, then auto shuts off in 10 seconds.

- **Ambient temperature too low:** Displays «AL» when ambient temperature is lower than 59.0 °F / 15.0 °C in body mode and 41.0 °F /5.0°C in object mode with 3 short beeps with red backlight for 5 seconds, then auto shuts off in 10 seconds.
- **Error function display:**
  «Err»: The system has a malfunction.
- **Blank display:** Check if the batteries have been inserted correctly. Also check polarity (<+> and <->) of the batteries.
- **Flat battery indicator:** If only battery icon is shown on the display, the batteries should be replaced immediately.

Cleaning and Disinfecting

Use an alcohol swab or cotton tissue moistened with alcohol (70% Isopropyl) to clean the thermometer casing and the measuring sensor. Ensure that no liquid enters the interior of the device. Never use abrasive cleaning agents, thinners or benzene for cleaning and never immerse the device in water or other cleaning liquids. Take care not to scratch the surface of the sensor lens and the display.

Battery Replacement

This device is supplied with 2 new, long-life 1.5V, size AA batteries. Batteries need replacing when this icon is the only symbol shown on the display.
Remove the battery door by sliding it in the direction shown. Replace the batteries – ensure correct polarity as shown by the symbols in the compartment.

WARNING-KEEP BATTERIES OUT OF REACH OF CHILDEN.

Some parts are small enough to be swallowed. If your suspect a battery has been ingested, call Poisons Information immediately. Ensure battery compartment is correctly secured.

Batteries and electronic devices must be disposed of in accordance with the locally applicable regulations, not with domestic waste.

Guarantee

This device is covered by a 2-year guarantee from the date of purchase.

- The guarantee covers the device. Batteries and packaging are not included.
- Opening or altering the device invalidates the guarantee.
- The guarantee does not cover damage caused by improper handling, discharged batteries, accidents or non-compliance with the operating instructions.

Product Specifications

Type: Non-Contact Thermometer
Measuring site: Forehead
Reference body site: Sublingual
Atmospheric pressure: 70kPa-106kPa
Measurement Range: Body mode: 93.2 °F -109.4 °F/ 34.0 °C -43.0 °C
Object mode: 32.2 °F-211.8 °F / 0.1-99.9 °C
Resolution: 0.1 °F / °C
Measurement accuracy (Laboratory):
Body mode: ±0.4 °F, 95.0°F-107.6 °F / ±0.2 °C, 35.0 °C-42.0 °C
±0.5 °F, 93.2°F-94.8 °F and 107.8°F-109.4°F
(±0.3 °C, 34.0 °C-34.9 °C and 42.1°C-43.0 °C)
Object mode:
±2 °F, 32.2 °F-211.8 °F (±1.0 °C, 0.1°C-99.9 °C)

Clinical results:	Repeatability: 0.26°C Bias: 0.08°C Limits of agreement : 1.13°C
Display Acoustic:	Liquid Crystal Display, 4 digits plus special icons • 1 short beep: The unit is turned on and ready for the measurement: • 1 long beep (1 second.): 93.2°F/34°C ≤ the reading ＜ 99.5°F/37.5°C in body mode and 32.2°F/0.1°C≤reading ≤211.8°F/99.9°C in object mode • 10 short beeps: 99.5 °F /37.5 °C ≤thereading≤43.0°C • 3 short beeps: 1. System error or malfunction 2. when measured temperature is higher than109.4°F/43°C in body mode or measured temperature higher than 211.8°F / 99.9°Cin object mode 3. When measured temperature is lower than 93.2 °F/34.0°C in body mode or measured temperature lower than32.2 °F / 0.1 °C in object mode 4. When ambient temperature is higher than 104.0 °F / 40.0 °C object model in body mode and object mode 5. When ambient temperature is lower than 10°C in body mode and 59.0 °F/5.0 °C in object mode.
Operating conditions:	Body mode: 59-104.0 °F /15-40.0 °C , Object mode: 41-104.0 °F/ 5-40.0 °C 15-95% relative maximum humidity
Transportation &Storage conditions:	-25 - +55 °C / -13 - +131 °F(15-95% relative maximum)
Automatic Switch-off:	Approx. 30 seconds when power on without measurement & after measurement
Battery:	2 x 1.5 V alkaline batteries; size AA
Battery Life:	approx. 2000 measurements (using new batteries)
Dimensions:	6.72x3.16x1.46inches (170.65x80.18x37mm)
Weight:	0.36lb (163g) (including batteries)
IP Class:	IP22

Reference to standard: Device corresponds to the requirements of the standard for infrared thermometers: ASTM E1965; IEC 60601-1; IEC 60601-1-2 (EMC); IEC 60601-1-11; ISO 80601-2-56

Expected service life: 5 years or 12000 measurements

Technical alterations reserved. According to the Medical Product User Act a biennial technical inspection is recommended for professional users. Please observe the applicable disposal regulations.

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications to the product are not approved by Microlife USA and could void the user's authority to operate the equipment under FCC jurisdiction.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: reorient or relocate the receiving antenna, increase the separation between the equipment and receiver, connect the equipment into an outlet on a circuit different from that to which the receiver is connected, consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance.

Trademark Usage:

Apple, the Apple logo, iPad, and iPhone are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc. The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks in this thermometer is under license. Other trademarks and trade names are those of their respective owners.

Distributed by:

REF

Printed in China
IB FR1MZ1-B EN 3524