medisana®

Non-contact & Multi-functional Infrared Thermometer

TM 320

Non-contact measurement

GB   Unit and controls

❶ Display
❹ On/Off-button
❼ Sensor cover
❿ Measurement result
⓭ Forehead measurement
❷ Measurement-button
❺ Battery compartment
❽ Sound symbol
⓫ Measurement unit (°C or °F)
⓮ Ear measurement
❸ Memory-button
❻ Sensor
❾ Battery symbol
⓬ Object measurement
⓯ Memory display

Explanation of symbols

This instruction manual belongs to this device. It contains important information about starting up and operation. Read the instruction manual thoroughly. Non-observance of these instructions can result in serious injury or damage to the device.

WARNING
These warning notes must be observed to prevent any injury to the user.

CAUTION
These notes must be observed to prevent any damage to the device.

NOTE
These notes give you useful additional information on the installation or operation.

Classification: Type BF applied part

Temperature range

Keep dry

IP22 Protection classification against solid objects and water

LOT LOT number

Manufacturer

Date of manufacture

C E 0197

GB Infrared Multi Functional Thermometer

Manual - *Please read carefully!*

Safety Information
IMPORTANT INFORMATION! RETAIN FOR FUTURE USE!
Read the instruction manual carefully before using this device, especially the safety instructions, and keep the instruction manual for future use. Should you give this device to another person, it is vital that you also pass on these instructions for use.

INTENDED USE:
Thank you for purchasing our Non-contact & Multi-functional Infrared Thermometer TM 320. This Infrared Thermometer is a non-sterile, reusable, handheld device. It can be used by consumers in home care environment and doctors in clinic as reference. It is intended for measuring human body temperature of three months and above of people by detecting infrared heat from the center of the forehead and in the ear.

• Only use the unit for the specific purpose described in the instruction manual. Any misuse will void the warranty.
• The unit is not designed for commercial use.
• Using this thermometer is no substitute for consulting a doctor.
• The thermometer and the patient must remain in a stable environment for at least 30 minutes before measuring the temperature.
• This device is not designed to be used by persons (including children) with limited physical, sensory or mental abilities, or by persons with insufficient experience and/or knowledge, unless under observation by a person responsible for their safety, or unless they have been instructed in the use of the device.
• Children must be supervised to ensure that they do not play with the device.
• The temperature in the forehead and temple area differs from the internal temperature, which is taken orally or rectally. If the measurement therefore does not match the patient's own perception or is unusually low, repeat the measurement every 15 minutes. As a reference, you can also measure the internal body temperature using a conventional oral or rectal thermometer.
• A control measurement using a conventional thermometer is recommended in the following cases:
  1. If the reading is surprisingly low
  2. For new-born infants up to 100 days old
  3. For children under three years of age who have a weakened immune system or who react unusually in the presence or absence of fever
  4. If you are using the thermometer for the first time or want to familiarise yourself with it
• If a fault occurs or the unit is damaged, do not attempt to repair the unit yourself, as this will void the warranty. Contact your dealer and only have repairs carried out by authorized service partners.
• Do not modify and / or open the device. It contains small parts which might be swallowed by children.
• Do not use the thermometer if it is damaged.
• Do not use the thermometer in damp environments. Do not immerse the thermometer in water or other liquids. **It is not watertight.**
• This device comprises sensitive components and must be treated with caution. Observe the storage and operating conditions described in the «Technical Specifications» section.
• 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.
• Do not shake or tap the thermometer. Do not drop it.
• Protect the device from direct sunlight, extremely high or low temperatures, dirt and dust.
• If the thermometer is not going to be used for a long period, remove the battery.

WARNING - The measurement results obtained by this thermometer do not represent a diagnosis and do not replace the consultation of a doctor, who should always be consulted in case of doubt.

Items supplied and packaging
Please check first of all that the device is complete and is not damaged in any way. In case of doubt, do not use it and contact your dealer or your service centre. The following parts are included:
• 1 **medisana** Non-contact & Multi-functional Infrared Thermometer **TM 320**
• 2 Batteries (AAA type, LR03) 1.5V
• 1 Instruction manual

The packaging can be reused or recycled. Please dispose properly of any packaging material no longer required. If you notice any transport damage during unpacking, please contact your dealer without delay.

**WARNING - Please ensure that polythene packing is kept away from the reach of children!
Risk of suffocation!**

Taking a temperature reading - quickly and accurately!
The **medisana** Non-contact & Multi-functional Infrared Thermometer allows precise, contact-free measurement of body temperature (at a distance of approximately 0-5 mm). The temperature is taken above the eyebrow between the forehead and the temple.
The value of the energy radiated there is measured and converted to a temperature value. The reading is displayed after 2 seconds. This enables you, for example, to take babies' temperature without disturbing their sleep.

Additional function: Apart from measuring body temperature, the Infrared multifunctional thermometer can also be used to measure the temperature of objects (e.g. fluids, surfaces, ambient temperature). The temperature range for this function is 0°C- 93.2°C (32°F-199.7°F).

Operation - Getting started
Remove/ insert battery: If the battery symbol ❾ appears in the LC display after a certain period of use, you must replace the battery by a new 1.5V battery (AAA type, LR03). Removal: Press the cover of battery compartment ❺, take it off and take out the battery. Insertion: Put in a new battery. Pay attention to correct polarity (please refer to instruction inside the battery compartment ❺). Put the battery compartment ❺ cover back on.

BATTERY SAFETY INFORMATION
• Do not disassemble batteries!
• Clean the battery and device contacts if necessary before putting in the batteries!
• Remove discharged batteries from the device immediately!
• Increased risk of leakage, avoid contact with skin, eyes and mucous membranes! If battery acid comes in contact with any of these parts, rinse the affected area with copious amounts of fresh water and seek medical attention immediately!
• If a battery has been swallowed seek medical attention immediately!
• Insert the battery correctly, observing the polarity!
• Keep the battery compartment well sealed!
• Remove the battery from the device if it is not going to be used for an extended period!
• Keep batteries out of childrens reach!
• Do not attempt to recharge batteries! There is a danger of explosion!
• Do not short circuit! There is a danger of explosion!
• Do not throw into a fire! There is a danger of explosion!
• Keep unused batteries in their packaging away from metal objects in order to prevent short circuiting!
• Do not throw used batteries into the household refuse; put them in a hazardous waste container or take them to a battery collection point, at the shop where they were purchased!

NOTES
The device will automatically switch off if there is no input for approx. 30 seconds.

Before use
Acclimatise the thermometer to the temperature of the room: For an accurate reading of a patient's temperature, their body must first acclimatise to the temperature of the room where the measurement will be made. The same applies to the Multi-functional Non-contact Infrared Thermometer **TM 320**. When taken somewhere else, it automatically adjusts itself to the new environment. The thermometer takes a certain amount of time to equalise its own temperature to that of the room. This depends on the difference between the two temperatures and can take more than 30 minutes. Precise readings can only be taken once this process is completed.
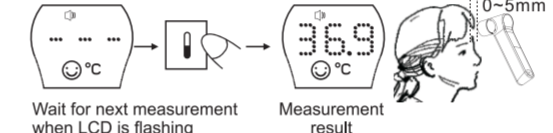
Measuring forehead temperature

NOTES For the most accurate readings:
  • **Do not take a baby's temperature during or directly after breastfeeding.**
  • **Patients should not drink or eat directly before or during a measurement, and they should avoid any physical exertion.**
  • **Clean the area where you are taking the temperature and remove any dirt, hairs or sweat before moving the sensor ❻ to the measuring position.**
  • **Do not remove the thermometer from the measuring position until it has beeped to signal the end of the reading.**
  • **If the sensor becomes dirty during or after a reading, clean it with a cotton bud dipped in cleaning alcohol before putting the thermometer away.**
  • **Always take the temperature in the same place, because the readings will vary in different environments.**
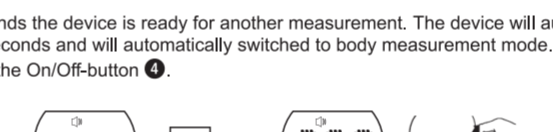
The thermometer's safety and accuracy has been inspected and confirmed, provided it is used in accordance with these instructions.

1. Put on sensor cover ❼ and then press the On/Off-button ❹ to switch on the thermometer. Now the last measured temperature value appears along with the corresponding symbol (for forehead temperature and for in-ear temperature). After approx. 3 seconds the device is ready for measurement - this will be indicated by a short beep.
2. To begin the measurement, point the sensor ❻ at the middle of the patient's forehead at a distance of 0-5 mm. If the patient's forehead has hair, sweat or dirt on it, remove this first so that the reading is as accurate as possible.
3. Press the Measurement-button ❷. You will see the LCD is flashing in the display ❶.
4. After approx. 1 second a long beep can be heard to indicate that the measurement is finished and the measured temperature will be shown.
5. Remove the sensor from the measuring position. If the result is <34°C , it shows LO with red backlight. When the result is 34°C-37.1°C , it shows green backlight. When the result is 37.2°C-38.1°C , it shows orange backlight. When the result is 38.2°C-43.0°C , it shows red backlight. When the result is >43.0°C , it shows and HI with red backlight.

After approximate 5 seconds the device is ready for another measurement. The device will automatically switch off if there is no input for approx. 30 seconds. You may also switch the device off manually by pressing the On/Off-button ❹.

Wait for next measurement when LCD is flashing   Measurement result

Measuring the temperature of in-ear
1. To measure the temperature in your ear, first remove the sensor cover ❼.
2. Then press the On/Off-button ❹ to switch on the thermometer. Now the last measured temperature value appears along with the corresponding symbol (for forehead temperature and for in-ear temperature). After approx. 3 seconds the device is ready for measurement - this will be indicated by a short beep.
3. Stretch your ear canal by pulling your ear backwards and upwards and carefully insert the sensor into the ear. For children under the age of 1 year, the sensor should be inserted into the ear canal, while the child is lying flat (e.g. on a bed) with the head slightly turned, so that the ear points upward.
4. Press the Measurement-button ❷. You will see the LCD is flashing in the display ❶.
5. After approx. 1 second a long beep can be heard to indicate that the measurement is finished and the measured temperature will be shown.
6. If the result is <34°C , it shows LO with red backlight. When the result is 34°C-37.1°C , it shows green backlight. When the result is 37.2°C-38.1°C , it shows orange backlight. When the result is 38.2°C-43.0°C , it shows red backlight. When the result is >43.0°C , it shows and HI with red backlight.

After approximate 5 seconds the device is ready for another measurement. The device will automatically switch off if there is no input for approx. 30 seconds and will automatically switched to body measurement mode. You may also switch the device off manually by pressing the On/Off-button ❹.

Wait for next measurement when LCD is flashing   Measurement result

Measuring the temperature of an object
1. Put on sensor cover ❼ and then press the On/Off-button ❹ for at least 6 seconds. Now the last measured temperature value appears along with the corresponding symbol (for forehead temperature and for in-ear temperature). After approx. 3 seconds the device is ready for measurement - this will be indicated by a short beep.
2. To begin the measurement, point the sensor ❻ at the targeted object.
3. Press the MEM-button ❸. You will see the LCD is flashing in the display ❶.
4. After approx. 1 second a long beep can be heard to indicate that the measurement is finished and the measured temperature will be shown.
5. Remove the sensor from the measuring position. The measurement result will show with white backlight. If the result is <0°C, it shows LO. When the result is >93.2°C, it shows HI.

After approximate 5 seconds the device is ready for another measurement. The device will automatically switch off if there is no input for approx. 30 seconds and will automatically switched to body measurement mode. You may also switch the device off manually by pressing the On/Off-button ❹.

Change the measurement unit
You can measure the temperature in °C or in °F. Please proceed as follows to select the unit of measurement:
1. The device has to be switched off.
2. Long press the MEM-button ❸ until you see the symbol «°C» or «°F» flashing.
3. Press the MEM-button ❸ again to change the unit of measurement.
4. Press the On/Off-button ❹ to save the selected measurement unit. Or wait for 8 seconds to save the selected measurement unit and the device is ready for the next measurement.

Recalling stored data
The thermometer can store up to 9 results. You can call up your stored data with a short press of the MEM-button ❸, without having previously switched on the thermometer with the On/Off-button ❹. The symbol appears in the display, together with "On".
If measurement values are stored in memory, first the memory slot number «1» appears and afterwards the stored temperature with the corresponding symbol (for body temperature and object temperature). By further pressing the MEM-button ❸, you can call up more stored values (memory slot «2» etc.). Totally there are 9 memory slots available, which may be recalled by pressing the MEM-button ❸ repeatedly.

Audio settings
You may activate or deactivate the acoustic signals of the device. To adjust, press the On/Off-button ❹ to switch on the thermometer. The last measured temperature value appears along with the corresponding symbol (for forehead temperature and for in-ear temperature).
Now you may adjust the signal settings by pressing the MEM-button ❸, until the signals are activated (symbol:) or deactivated (symbol will be disappeared). Afterwards, press the On/Off-button ❹ to save the setting and switch off the device.

Error messages

Screen display	Reasons	Solutions
HI	When the target object temperature is higher than measurement range which the ear temperature is more than 43.0°C, the LCD screen will show "HI" indication.	1. When the measurement probe is not properly placed in the ear canal or if the measurement distance is too far during the measurement process, the measurement result may be low.
Lo	When the target object temperature is lower than measurement range which the ear temperature is less than 34°C, the LCD screen will show "Lo" indication.	2. When measurement probe is dirty, the measurement value may be low; we should use a cotton swab to dip alcohol to wash the measurement probe properly.
Er.H	This product has an upper limit of operating temperature of 40°C. When the ambient temperature exceeds this temperature point, the LCD screen will display an error message "Er.H".	When you operate this product, the environment temperature cannot be greater than 40°C.
Er.L	This product has a lower limit of operating temperature of 10°C. When the ambient temperature exceeds this temperature point, the LCD screen will display an error message "Er.L".	When you operate this product, the environment temperature can not be lower than 10°C.

When the operation is wrong, if the sound is turned on, then the sound will read the value and remind at this moment. (A short beep will be heard.)

Troubleshooting

Phenomenons	Reasons	Solutions
When the power is turned on, the screen can not be displayed.	The battery is exhausted.	Replace the new battery.
	The battery polarity is wrong.	The battery polarity is the same as the battery case.
The measurement temperature is low.	The measurement position is not correct.	Measure the temperature correctly according to the instructions.
	There are dirt stuff in the sensor or ear canal.	Please clear the dirt before the measurement.
Big temperature fluctuations with continuous measurement.	The measurement interval is too small.	The interval for each measurement should be above 10 seconds.

Cleaning and maintenance
• The sensor ❻ is the most delicate part of the device. Protect it from dirt and damage. Clean the sensor with a cotton bud dipped in warm water or 70% isopropyl alcohol.
• Do not immerse the thermometer in water or any other liquid. **It is not watertight.**
• To clean the thermometer, use a soft cloth slightly dampened with mild soapy water or 70% isopropyl alcohol. Do not let water get into the unit. Only use the unit again when completely dry.
• Never use aggressive cleaning agents, thinners, benzine or tough brushes.
• Take care not to scratch the lens of the sensor, the display or the housing.
• Do not use or store the unit in an environment where the ambient temperature or humidity is too high or too low (see operating conditions in the "Technical specifications" section), in direct sunshine, in the vicinity of static electricity or in a dusty environment.
• Remove the batteries if you do not wish to use the unit for an extended period of time. Otherwise there is a danger that the batteries may leak.
• If the thermometer is used as described in these instructions, no regular maintenance or calibration is required.

Disposal
This product must not be disposed of together with domestic waste. All users are obliged to hand in all electrical or electronic devices, regardless of whether or not they contain toxic substances, at a municipal or commercial collection point so that they can be disposed of in an environmentally acceptable manner.
Please remove the battery before disposing of the device/unit. Do not dispose of old batteries with your household waste, but at a battery collection station at a recycling site or in a shop. Consult your municipal authority or your supplier for information about disposal.

Technical specifications

Name and model:	**medisana** Non-contact & Multi-functional Infrared Thermometer **TM 320**
Display system:	digital display (LCD)
Power supply:	2 x batteries (AAA type, LR03) 1.5V
Expected service life:	5 years
Measuring range:	Body mode 34-43°C (93.2- 109.4°F); Object mode 0°C-93.2°C (32°F-199.7°F)
Accuracy of measurement (laboratory readings):	± 0.2°C, 35.0°C-42.0°C (± 0.4°F, 95.0°F-107.9°F) , other temperature ± 0.3°C
Resolution:	0.1°C (0.1°F)
Memory capacity:	up to 9 readings
Operating temperature:	10.0°C-40.0°C (50.0°F-104.0°F); rel. humidity 15-90% RH
Storage/transport temperature:	-25°C to +55°C (-13°F-131°F), rel. humidity 0-93%
Dimensions:	approx. 31 x 175 x 72 mm
Weight:	approx. 77 g
Article No.:	48624
EAN Code:	40155 88 48624 1

The CE-mark of this device refers to the EC-directive 93/42/EEC MDD. The unit is designed for home use only. For commercial use, a metrological inspection must be carried out once every year. This calibration will be charged for and can be carried out by an appropriate authority or an authorised service centre - in accordance with the regulations for users of medical equipment. Electromagnetic compatibility: The device complies with the EN 60601-1-2 standard for electromagnetic compatibility. Details on this measurement data can be found at the end of this manual.

In accordance with our policy of continual product improvement, we reserve the right to make technical and optical changes without notice.

Warranty and repair terms
Please contact your dealer or the service centre in case of a claim under the warranty. If you have to return the unit, please enclose a copy of your receipt and state what the defect is. The following warranty terms apply:
1. The warranty period for **medisana** products is three years from date of purchase. In case of a warranty claim, the date of purchase has to be proven by means of the sales receipt or invoice.
2. Defects in material or workmanship will be removed free of charge within the warranty period.
3. Repairs under warranty do not extend the warranty period either for the unit or for the replacement parts.
4. The following is excluded under the warranty:
  a. All damage which has arisen due to improper treatment, e.g. nonobservance of the user instructions.
  b. All damage which is due to repairs or tampering by the customer or unauthorised third parties.
  c. Damage which has arisen during transport from the manufacturer to the consumer or during transport to the service centre.
  d. Accessories which are subject to normal wear and tear.
5. Liability for direct or indirect consequential losses caused by the unit are excluded even if the damage to the unit is accepted as a warranty claim.
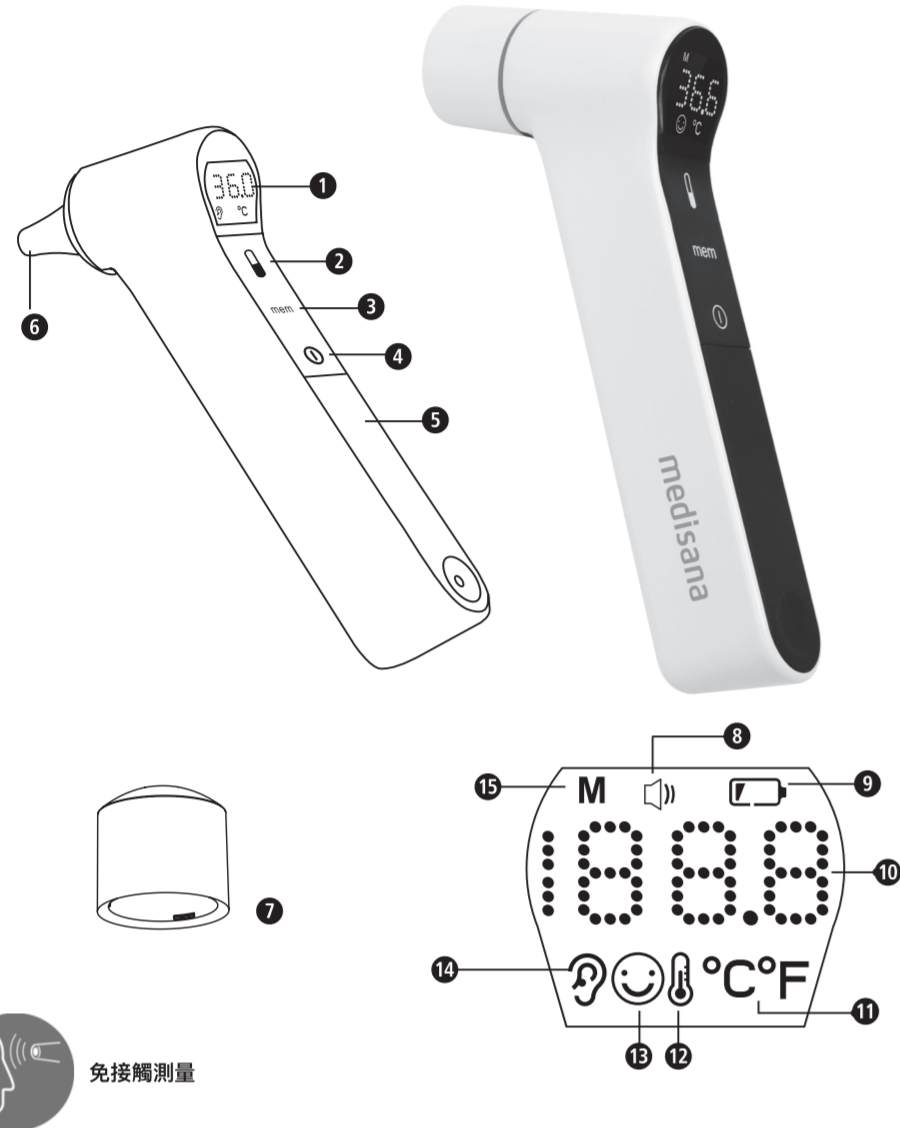
Shenzhen Pango Medical Electronics Co., Ltd.
2-4 Floor, No.5 Shanzhuang Rd., Xikeng Village, Henggang Town, Longgang District, Shenzhen, Guangdong, China.

medisana

馬德保康多功能免接觸紅外線耳額溫槍

型號：PG-IRT1603

衛部醫器陸輸字第001279號

① ② ③ ④ ⑤ ⑥ ⑧ ⑨ ⑩ ⑦ ⑮ M ⑭ ⑬ ⑫ ℃ ℉ ⑪

免接觸測量

TW 產品說明
❶ 顯示螢幕　　❷ 測量按鈕　　❸ 記憶功能按鈕
❹ 電源按鈕　　❺ 電池蓋　　❻ 偵測器
❼ 保護蓋　　❽ 聲音符號　　❾ 電量顯示
❿ 測量結果　　⓫ 測量單位（℃ 或 ℉）　⓬ 顯示為物體測量
⓭ 顯示為前額測量　⓮ 顯示為耳溫測量　⓯ 記憶溫度顯示

標誌說明

📖 此說明書屬於本設備。其中包含有關啟動和操作的重要資訊。請仔細閱讀說明書。不遵守這些說明可能導致嚴重損害或損壞耳額溫槍。

⚠️ **警告**
必須遵守這些警告說明以防止對使用者造成任何傷害。

⚠️ **小心**
必須遵守這些說明以防止對耳額溫槍造成任何損壞。

ℹ️ **注意**
這些說明提供關於安裝或操作的有用附加資訊。

🚶 分類：BF 型應用零件

🌡️ 溫度範圍

☂️ 保持乾燥

LOT 批號

🏭 製造商

📅 製造日期

CE 0197

TW 多功能紅外線耳額溫槍
說明書 – 請仔細閱讀！

⚠️ ⚠️ ℹ️

安全資訊
重要資訊！請妥善保存以備未來使用！
使用前請務必詳閱原廠之使用說明書並遵照指示使用。

預期用途：
感謝您購買本產品。本耳額溫槍是一種非無菌、可重複使用的便攜產品，供消費者作居家檢測和臨床醫生參考。透過紅外線熱量測量額頭中央及耳朵內的體溫（僅適用於測量三個月大嬰孩或以上年齡人士的體溫）。

- 本耳額溫槍僅用於此說明書中描述的特定用途。任何不當使用將使保固失效。
- 本耳額溫槍並非為商用而設計。
- 使用本耳額溫槍不能代替諮詢醫生。
- 本耳額溫槍和病人必須處於穩定的環境中至少 30 分鐘，才能測量體溫。
- 本耳額溫槍不適合身體、感官和精神能力受限的人（包括兒童）使用，也不適合經驗或知識不足的人使用，除非是在負責他們安全的人的監視下，或者已向他們說明了如何使用本耳額溫槍。
- 必須對兒童進行監督，以確保他們不會拿本耳額溫槍來玩耍。
- 前額和太陽穴位置的溫度與體內溫度不同，體內溫度通過口或直腸測出。因此，如果測量結果不符或遠低於病人自己的預期溫度，則每 15 分鐘重複測量一次。作為參考，您還可以使用常規口腔或直腸溫度計測量體內溫度。
- 在下列情況下，建議使用傳統溫度計進行測量：
  1. 測量溫度異常低
  2. 在測量 100 天以內的新生兒的體溫時
  3. 在測量三歲以下免疫系統較弱的兒童，或在發燒或不發燒時反應異常的人的體溫時
  4. 您是第一次使用或想熟悉本耳額溫槍時搭配確認
- 如果本耳額溫槍發生故障或損壞，不要試圖自己維修耳額溫槍，因為這將使保固無效。聯繫您的經銷商，由授權的服務合作夥伴進行維修。
- 請勿自行拆卸與打開本耳額溫槍。它含有微小零件，可能被兒童誤食。
- 若耳額溫槍損壞，請勿使用。
- 不要在潮濕的環境中使用耳額溫槍。勿將耳額溫槍浸入水或其他液體中。本耳額溫槍不防水。
- 本耳額溫槍包含敏感零件，必須小心處理。請遵守《技術規格》部分中所述的存放和操作方式。
- 請勿在行動電話或無線電設備等強電磁場附近使用本耳額溫槍。
- 使用本耳額溫槍時，請與此類設備保持至少 3.3 m 的距離。
- 請勿搖晃或敲擊本體溫計。請勿摔落。
- 保護耳額溫槍並遠離陽光直射、避免極高或極低溫度、污垢和灰塵。
- 如果長時間未使用本耳額溫槍，請取出電池。

⚠️ **警告**
使用該耳額溫槍得出的測量結果不代表診斷，也不能代替醫生的診症，如有疑問，請立即諮詢醫生。

產品內容及包裝
請先檢查耳額溫槍是否完整以及是否存在任何形式的損壞。如果存在疑問，請勿使用它並聯繫您的經銷商或服務中心。
產品內容包含：
- 1 個馬德保康多功能免接觸紅外線耳額溫槍
- 2 節電池（AAA 型，LR03），1.5 V
- 1 本說明書
包裝可以重複使用或回收。請妥善處理任何不需要的商品包裝。如果您在打開包裝的過程中注意到任何運輸損傷，請立即聯繫您的經銷商。

⚠️ **警告 – 請確保將聚乙烯包裝袋放在兒童不能接觸的地方！窒息風險！**

本產品可進行準確且免接觸的體溫測量（距離約為 0–5 mm）。將本耳額溫槍放在眉毛上方的前額和太陽穴之間測量體溫。
本耳額溫槍所測量到的能量經過測量後轉化為體溫值。溫度結果在 2 秒後顯示。因此，您可以使用本耳額溫槍，在不影響嬰兒睡眠的條件下測量嬰兒的體溫。
其他功能：除測量體溫外，多功能免接觸式耳額溫槍還可測量物體的溫度（如液體、物體表面、環境溫度）。該功能的溫度測量範圍為 0℃– 93.2℃（32℉–199.7℉）。

操作 – 電池取出/安裝
取出/安裝電池：如果在使用一段時間後，液晶顯示螢幕上出現電池符號 ❾，則必須用新的 1.5V 電池（AAA 型，LR03）更換電池。取出：按下電池蓋 ❺，將其取下並取出電池。安裝：放入新電池。注意擺放方向正確（請參閱電池蓋 ❺ 中的說明）。重新裝上電池蓋 ❺。

電池安全資訊
- 請勿拆解電池！
- 如果需要，請在放入電池前清潔電池、耳額溫槍與安裝電池接觸口！
- 立即從耳額溫槍中取出廢電池！
- 若電池漏液外洩，應避免接觸皮膚、眼睛和黏膜！如果電池酸液接觸其中任何部位，請使用大量的清水沖洗受影響區域並立即就醫！如果誤吞電池，應立即就醫！
- 如果誤吞電池，應立即就醫！
- 正確安裝電池，正負極不要裝反！
- 保持電池蓋完整密封！
- 若長期不使用耳額溫槍，請從耳額溫槍中取出電池！
- 將電池保管在兒童不能接觸的地方！
- 請勿嘗試給電池充電！存在爆炸風險！
- 請勿將電池短路！存在爆炸風險！
- 請勿投入火中！存在爆炸風險！
- 將未使用的電池保留在包裝中並遠離金屬物體以防短路！
- 請勿將使用過的電池扔進一般垃圾中；應將電池放入廢棄電池回收筒或帶到其購買商店的電池回收筒！

ℹ️ **備註**
如果在大約 30 秒內沒有操作，耳額溫槍將自動關閉。

使用之前
讓耳額溫槍適應房間的溫度：為了準確地測量使用者的體溫，使用者必須先適應測量房間的溫度。本產品亦是如此。當耳額溫槍進入到新環境中時，它們會自動調整以適應該環境。耳額溫槍需要一定的時間來使自身的溫度與房間的溫度相同。需要多長時間取決於兩種溫度之間的差異，甚至可能需要 30 多分鐘。只有在這個過程完成後才能獲得精確的測量結果。

測量前額溫度

ℹ️ **備註，為獲得最準確的測量結果：**
- 請勿在哺餵母乳時或哺餵母乳後直接測量嬰兒的體溫。
- 在測量溫前或測量中，病人不應飲水或進食，而且應避免任何強體力活動。
- 清洗需要測量體溫的部位除去任何污垢、毛髮或汗液，然後再將偵測器 ❻ 移到測量位置。
- 在耳額溫槍響起蜂鳴音指示測量結束前，請勿移走耳額溫槍。
- 如果偵測器在測量期間或之後變髒，請用棉花棒沾酒精清潔偵測器，然後再將耳額溫槍收納好。
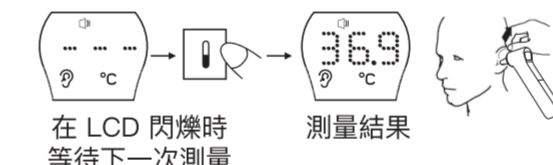- 請務必在同一個地方測量體溫，因為在不同的環境下測量結果會發生變化。

本耳額溫槍其安全性和精準度已經過檢查確認，只要按照說明使用本耳額溫槍即可。

1. 蓋上保護蓋 ❼，然後按下電源按鈕 ❹ 打開耳額溫槍。現在，最後一次測得的溫度值和相應的符號一起出現（前額溫度和耳內溫度）。在大約 3 秒之後，耳額溫槍即可用於進行測量 – 會發出一聲短促的蜂鳴音。
2. 開始測量時，讓偵測器 ❻ 以 0–5 mm 的距離指向病人前額的中央。如果病人前額上有毛髮、汗液或污垢，請先將其清除，讓測量結果盡可能準確。
3. 按下測量按鈕 ❷。您將看到 LCD 在顯示螢幕 ❶ 中閃爍。
4. 大約 1 秒後，會聽到一聲較長的蜂鳴音，表示測量完成，並顯示測得的溫度。
5. 將偵測器從測量位置移開。如果結果 <34℃，則顯示 LO 並帶有紅色背光。如果結果為 34℃–37.1℃，顯示綠色背光。如果結果為 37.2℃–38.1℃，顯示橙色背光。如果結果為 38.2℃–43.0℃，顯示紅色背光。如果結果 >43.0℃，它顯示 HI 並帶有紅色背光。
6. 在大約 5 秒後，耳額溫槍即可進行另一次測量。如果在大約 30 秒內沒有操作，耳額溫槍將自動關閉。您也可以通過按電源按鈕 ❹ 手動關閉儀器。

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[…]  →  36.9  0–5mm
 ℃        ℃
在 LCD 閃爍時    測量結果
等待下一次測量
```
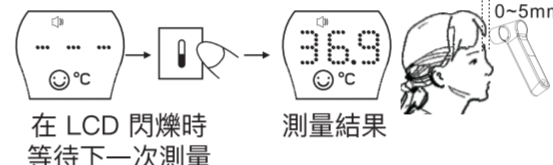
測量耳內溫度
1. 測量耳內溫度時，先取下保護蓋 ❼。
2. 然後按下電源按鈕 ❹ 以打開耳額溫槍。現在，最後一次測得的溫度值和相應的符號一起出現（前額溫度和耳內溫度）。在大約 3 秒之後，耳額溫槍即可用於進行測量 – 會發出一聲短促的蜂鳴音。
3. 通過向後和向上拉耳朵來拉伸耳道，並小心地將偵測器放入耳朵。對於 1 歲以下的兒童，需要兒童平躺（例如：平躺在床上）並且稍稍動頭部，使耳朵朝上，然後將偵測器放入耳道內。
4. 按下測量按鈕 ❷。您將看到 LCD 在顯示螢幕 ❶ 中閃爍。
5. 大約 1 秒後，會聽到一聲較長的蜂鳴音，表示測量完成，並顯示測得的溫度。
6. 如果結果 <34℃，則顯示 LO 並帶有紅色背光。如果結果為 34℃–37.1℃，顯示綠色背光。如果結果為 37.2℃–38.1℃，顯示橙色背光。如果結果為 38.2℃–43.0℃，顯示紅色背光。如果結果 >43.0℃，它顯示 HI 並帶有紅色背光。
在大約 5 秒後，耳額溫槍即可進行另一次測量。如果在大約 30 秒沒有操作，耳額溫槍將自動關閉，並自動切換到人體測量模式。您也可以通過按電源按鈕 ❹ 手動關閉耳額溫槍。

```
[…]  →  36.9
 ℃        ℃
在 LCD 閃爍時    測量結果
等待下一次測量
```

測量物體的溫度
1. 蓋上保護蓋 ❼，然後按下電源按鈕 ❹ 至少 6 秒。現在，最後一次測得的溫度值和相應的符號一起出現（前額溫度和耳內溫度）。在大約 3 秒之後，耳額溫槍即可用於進行測量 – 會發出一聲短促的蜂鳴音。
2. 開始測量時，將偵測器 ❻ 對準測量物體。
3. 按下記憶功能按鈕 ❸。您將看到 LCD 在顯示螢幕 ❶ 中閃爍。
4. 大約 1 秒後，會聽到一聲較長的蜂鳴音，表示測量完成，並顯示測得的溫度。
5. 將偵測器從測量位置移開，測量結果將以白色背光顯示。如果結果 <0℃，顯示 LO。當結果 >93.2℃，則顯示 HI。
在大約 5 秒後，耳額溫槍即可進行另一次測量。如果在大約 30 秒後沒有操作，耳額溫槍將自動關閉，並自動切換到人體測量模式。您也可以通過按電源按鈕 ❹ 手動關閉耳額溫槍。

轉換測量單位
您可以以 ℃ 或 ℉ 為單位測量溫度。請按以下步驟選擇測量單位：
1. 必須開啟本耳額溫槍。
2. 長按記憶功能按鈕 ❸，直到看到符號「℃」或「℉」閃爍。
3. 按下記憶功能按鈕 ❸ 轉換測量單位。
4. 按電源按鈕 ❹ 儲存已選測量單位，或等待 8 秒自動儲存已選測量單位，準備進行下一次測量。

記憶模式
本耳額溫槍最多可記憶最近的 9 個測量結果。您可以短按記憶功能按鈕 ❸ 調出每個記憶編號儲存的溫度值，且無需預先按電源按鈕 ❹ 打開耳額溫槍。符號和「On」一起出現在顯示螢幕中。
如果耳額溫槍值儲存在記憶體中，則首先顯示記憶位置編號«1»，然後顯示已儲存的溫度以及相應的符號（體溫和物體溫度）。通過進一步按記憶功能按鈕 ❸，您可以調出更多儲存的值（記憶位置«2»等）。總共有 9 個可用的記憶編號，可通過反覆按記憶功能按鈕 ❸ 來將其調出。

聲音設置
您可以開啟或關閉耳額溫槍的聲音。要進行調整，請按下電源按鈕 ❹ 以打開耳額溫計。最後一次測得的溫度值和相應的符號一起出現（前額溫度和耳內溫度）。現在，您可以通過按記憶功能按鈕 ❸ 直到聲音符號顯示於螢幕上。或等聲音符號消失來調整聲音設置。然後，按電源按鈕 ❹ 儲存設定並關閉耳額溫槍。

錯誤訊息

螢幕顯示	原因	解決方案
HI	當測量物體溫度高於耳溫的測量範圍上限 43.0℃ 時，LCD 螢幕將顯示「HI」指示。	1. 如果測量偵測器未正確放置在耳道中，或者在測量過程中測量距離太遠，則測量結果可能會偏低。
Lo	當測量物體溫度低於耳溫的測量範圍下限 34.0℃ 時，LCD 螢幕將顯示「Lo」指示。	2. 如果測量偵測器變髒，則測量值可能會偏低；我們應該低溫用棉花棒沾酒精來正確清潔測量器。
Er.H	該產品的使用溫度上限為 40℃。當環境溫度超過此溫度點時，LCD 螢幕將顯示錯誤訊息「Er.H」。	操作本耳額溫槍時，環境溫度不能高於 40℃。
Er.L	該產品的使用溫度下限為 10℃。當環境溫度超過此溫度點時，LCD 螢幕將顯示錯誤訊息「Er.L」。	操作本耳額溫槍時，環境溫度不能低於 10℃。

如果操作錯誤，在打開聲音時，聲音將讀取該值並在此時提醒您。（會聽到一聲短促的蜂鳴音。）

故障排除

狀況	原因	解決方法
電源開啟時，無法顯示螢幕。	電池電量耗盡。	更換新電池。
	電池極性錯誤。	電池極性與電池盒相同。
測量溫度偏低。	測量位置不正確。	根據說明書正確地測量溫度。
	偵測器或耳道中有灰塵。	請在測量前清除灰塵。
連續測量時溫度波動較大。	測量間隔時間太短。	每次測量的間隔時間應大於 10 秒。

保養與清潔
- 偵測器 ❻ 是本耳額溫槍的最精密零件。請保護它遠離灰塵並避免損壞。用棉花棒沾溫水或 70% 異丙醇清洗偵測器。
- 請勿將耳額溫槍浸入水中或任何其他液體中。耳額溫槍不防水。
- 清潔耳額溫槍時，請使用軟布沾上溫和的肥皂水或 70% 異丙醇進行清潔。請勿讓水進入耳額溫槍中。待耳額溫槍完全乾燥後再繼續使用。
- 切勿使用強力清潔劑、稀釋劑、汽油或硬毛刷進行清潔。
- 注意不要划傷偵測器鏡頭、顯示螢幕和商品表面。
- 切勿在環境溫度或濕度過高或過低（請參閱「技術規範」部分中的使用條件）、陽光直射、靜電附近或灰塵環境中使用電子或存放本耳額溫槍。
- 如果長時間不用，請從耳額溫槍中取出電池。否則存在電池洩露的風險。
- 如果按以上說明使用本耳額溫槍，則無需定期維護或校正。

廢棄處理
🗑️ 本產品不得隨生活垃圾一起處理。所有使用者都有義務將所有電氣或電子設備（無論它們是否含有害物質）上交到市政或商業收集點，以便按照環保的方式處理。處理本產品時，請遵守當地法規。舊電池不得隨家庭垃圾一起處理，而應送至回收點或商店的電池收集站。有關處理的資訊，請諮詢您的市政當局或供應商。

技術規格
名稱和型號：	馬德保康多功能免接觸紅外線耳額溫槍
顯示系統：	數字顯示螢幕（LCD）
電源：	2 節電池（AAA 型，LR03），1.5 V
預期使用壽命：	5 年
測量範圍：	體溫測量模式 34–43℃（93.2– 109.4℉），物體測量模式 0℃–93.2℃（32℉–199.7℉）（非醫療效能）
準確度（實驗室最大誤差）：	± 0.2℃，35.0℃–42.0℃（± 0.4℉，95.0℉–107.9℉），其他溫度 ± 0.3℃
顯示精確位數：	0.1℃（0.1℉）
記憶容量：	多達 9 個測量結果
操作環境溫度：	10.0℃–40.0℃（50.0℉–104.0℉），相對濕度 15–90% RH
存放溫度：	−25℃ to +55℃（−13℉–131℉），相對濕度 0–93%
尺寸：	約 31 x 175 x 72 mm
重量：	約 77 g
貨號：	48624
EAN 編號：	40155 88 48624 1

本耳額溫槍的 CE 標誌參照歐盟指令 93/42/EEC MDD。本耳額溫槍僅供家庭使用。如需商用，必須每年進行一次計量檢查。此校正將收取費用，校正可由適當的機構或授權服務中心按照針對醫療器械使用者的法規來執行。

按照我們的產品持續改進政策，我們保留在不通知的情況下進行技術和外觀更改的權利。

保固和維修條款
如果在保固範圍內提出維修需求，請聯繫您的經銷商或服務中心。如果您必須退回本耳額溫槍，請附上您的收據副本並說明具體缺陷。以下保修條款將適用：
1. 馬德保康產品的保固期為從購買之日起的三年。如果有保固維修，則必須通過銷售收據或發票證明購買日期。
2. 如有材料或工藝缺陷，保固期內將予以免費排除。
3. 保固期內的維修不會延長耳額溫槍或更換零件的保固期。
4. 以下情況不在保修範圍之內：
   a. 由於使用不當（例如不遵守使用者說明）而導致的所有損壞。
   b. 由於客戶未經授權的第三方維修或篡改而導致的所有損壞。
   c. 在從製造商向消費者運輸或到服務中心的運輸期間出現的損壞。
   d. 正常磨損的零件。

馬德保康多功能免接觸紅外線耳額溫槍
產品貨號: 48624
型號: PG-IRT1603
中國製造

醫療器材商品名稱: 恆隆行貿易股份有限公司
醫療器材商地址: 114679臺北市內湖區洲子街88號7樓之1

製造業者名稱: Shenzhen Pango Medical Electronics Co., Ltd.
製造業者地址: 2–4 Floor, No.5 Shanzhuang Rd., Xikeng Village, Henggang Town, Longgang District, Shenzhen, Guangdong, China.