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Dual-Mode Infrared Thermometer
Instruction manual

www.temp-ir.com
Introduction

Thank you for choosing the Dual-mode Digital Infrared Thermometer.

With the unique technology, the Dual-mode infrared thermometer can give the result with Dual-mode, 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 Dual-mode infrared thermometer can be used to read the body temperature by measure the ear and forehead temperature, which is suitable for adult and children (ear test mode only for the child above 3 months).

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

| 13. LED backlight specifications | ≥ 1.2cd/m² |
| 15. Operational conditions | ASTM 10°C-40°C (50°F-104°F)/15-95%RH |
| 16. Type of measuring | Applicable for forehead temperature and ear temperature |
| 17. Battery | Changeable for two 1.5V triple AAA batteries |
| 18. Battery life | More than 3000 times |

19. Accuracy for clinical test

The maximum allowable error for clinical test is specified in the formula below:

\[ \text{T error} = \frac{|T_1 - T_{\text{ref}}| + |T_2 - T_{\text{ref}}|}{2} \]

\[ \leq 0.3°C/0.6°F \text{  (for 95%)} \]

Among which:

- T1 and T2 represent temperature value for thermometer under test respectively, Tref represents the constant reference temperature

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.
● 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

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<th>Items</th>
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<td>models</td>
<td>Dual-mode infrared thermometer</td>
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<tr>
<td>1.Applicable regulations and laws</td>
<td>ASTM 1965/EN12470-5</td>
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<tr>
<td>2.Temperature units</td>
<td>C/°F , adjustable</td>
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</table>
| 3.Measurement range           | Forehead temperature mode:32.0°C-42.2°C / 89.6°F – 107.9 °F  
                                  ear temperature mode:0.0°C-100.0°C /32.0°F – 212.0 °F |
| 4.Precision                   | ±0.2°C /±0.4°F              |
| 5.Display resolution         | 0.1°C/0.1°F                 |
| 6.Latency Time                | 1 second                   |
| 7.Abnormal state display      | LCD displays ”L °C” if the measured temperature is below the minimum of measurement range.  
                                  LCD displays ”H °C” 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°C~40°C (50°F-104 °F). There shall be “ErC” if the calibration process is not completed or EEPROM is abnormal. |
| 8.Sound                       | volume≥50 db (the perpendicular distance from dB Volume sensor to thermometer is 10cm ) |
| 9.Automatic shutdown function | 10s±1s                     |
| 10.Low-voltage display function | The product shall display low-voltage signal if the voltage is below 2.51V±0.15V. |
| 11.Memory function            | Memorize 20 groups of measured temperature. |
| 12.Current consumption        | Istand-by<2μA; Iworking<0.5mA; I buzzer on<2mA; Ibanklight<15mA |
1. The advantages of Dual-mode infrared thermometer

Multiple use (measurement of forehead temperature and ear temperature)
Thanks to Dual-mode design, you are free to take body temperature by detecting the infrared heat given off by the forehead.
The product consists of ABS plastics, temperature sensor, Infrared temperature measuring element, microcomputer controlled circuit, LCD, backlight and buzzer.

Convenient for use
- Special ergonomic design to facilitate operation.
- Easy to use even when the child is sleeping.
- It provides comfortable user experience compared with anus thermometer for children, rapid reading and simple operation compared with mouth thermometer.

Memory recall
A maximum of 20 previous readings is available to help you track the changes of your body temperature.

Safe and hygienic
- Compared to mercury thermometer, there is no danger of breaking the glass or swallowing mercury.
- It is totally safe to use on children. (ear thermometer over 3 months)

Fever warning
When the reading exceeds 37.5°C/99.5°F, this product shall warn the user that he/she may have a fever by 7 rapid and short rings with LCD flicker.(For normal forehead temperature, the signal is long ring with LCD no flicker)

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
- The device is not used for newborn baby.

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<tr>
<th>LCD display</th>
<th>How to change TempIR dual thermometer fr om ℉ degrees to ℃ degrees and ℃ to ℉.</th>
<th>Sound and backlit</th>
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<tr>
<td>-- -- ℉</td>
<td>When the thermometer is powered off, hold down F2 key until ℉ shows in screen, then release, then press F2 once to change to ℃. Let power down then when you start back up its in ℃(same for ℃ to ℉)</td>
<td>silence</td>
</tr>
</tbody>
</table>

Error message

| Er1 | It shall display “Er1” when ambient temperature exceeds 40.0°C/104°F or drop below 10.0°C/50.0°F. | 3 short tick and green backlit for 3 seconds. |
| ErC | 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 green backlit for 3 seconds. |
| - | There shall be low-voltage signal (no twinkling) when the battery voltage is below 2.61V±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: Dual-mode Infrared Thermometer contains sensitive electronic component and shall not use under the condition with electromagnetic interference, (such as the place nearby the mobile phones and microwaves)
measured temperature exceed 37.5°C / 99.5°F, which is a warning for patients that he/she may have a fever.

1. The measured value exceeds 100°C / 212.0°F under ear temperature mode.
2. The measured value exceeds 42.2°C / 107.9°F under forehead temperature mode.

3 short tick and green backlit for 3 seconds.

Inquiry for memory data, Storing 20 groups of data

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<th>LCD display</th>
<th>Operational method and instruction for displays</th>
<th>Sound and backlit</th>
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<tr>
<td>-- -- M</td>
<td>Click button F2 for 4-8 seconds and LCD displays &quot;-- --&quot; with M signal twinkling.</td>
<td>silence</td>
</tr>
<tr>
<td>G M</td>
<td>Click button F2 again and the LCD displays the first data group with M signal twinkling. Click button F2 and it shall display the serial number for 1 second and then display the measured data and mode icon. There are 20 groups of data.</td>
<td>silence</td>
</tr>
</tbody>
</table>

• The device is not continuous monitoring device.
• Dual-mode Infrared Thermometer is not waterproof. Please do not douse it into water or other liquids. Cleaning and disinfection procedure comply with the instructions specified in [cleaning and storage]
• Please do not use the product if the temperature sensor or the Dual-mode infrared thermometer shows any sign of damage. Do not try to repair the product if it is damaged. Please contact Customer Service.
• Dual-mode Infrared Thermometer consists of precision parts with high quality. Please avoid sharp shocks to or dropping the thermometer. Do not twist the Dual-mode infrared thermometer and the temperature sensor.

• 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
  Atmospheric pressure: 860hPa to 1060hPa

• Battery Installation:
  Put the two AAA batteries into battery compartment in correct polarities. 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 keep this Dual-mode infrared thermometer out of children’s reach

• Medical assistance can’t be replaced by the use of infrared Dual-mode infrared thermometer
● The Dual-mode infrared thermometer is not waterproof.

### 3. Instructions for product features

1. **Sensor** (Take off the cover before taking the eardrum temperature)
2. **F1**: start detection of forehead temperature
3. **F2**: start detection of eardrum temperature
4. **LCD display**
5. **Battery cover**

### 4. How to measure the forehead temperature

Hold Button F1, scan the forehead from one side to the other and then release the button when the thermometer is off. Now you can see the temperature reading on LCD display. Detecting temperature on a point may result in inaccurate reading. You can take another measurement when the backlight is off.

### 5. How to measure the ear temperature

Take off the sensor cover; insert the sensor into the ear canal. Then press the button F2 when the thermometer is off, the temperature reading is shown on LCD display. You can take another measurement when the backlight is off.

### In order to avoid the inaccuracy:

1. Please make sure that there is no dirt in on the temperature sensor
2. Please make sure that the device only be used in a room, and there is no strong breezes.
3. Before measuring the forehead temperature, make sure area is dry.
4. Before you measuring the ear temperature, please clean the ear canal first.

(5) Please make sure that there is no movement before and during measuring.
(6) If Dual-mode Infrared Thermometer is moved from one room to another, it is suggested to wait for more than 30 minutes, and please follow the rule (2).
(7) If the person having temperature taken is moved to another room or area it is suggested to wait more than 10 minutes, and please follow the rule (2).
(8) Do not hold Dual-mode Infrared Thermometer for long time as it is highly sensitive to heat.

Dual-mode Infrared Thermometer has undergone clinical test, it is safe and accurate when using in accordance with operation manual.

### 6. Instructions for display and operation

<table>
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<th>LCD display</th>
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<th>Sound and backlit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Measurement of forehead temperature</td>
<td>1. Measure the forehead temperature under shutdown state, please press button F1 or hold down button F1, 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.</td>
<td>1. Forehead temperature mode: 32.0℃/89.6℉ &lt;= t &lt;37.6℃/99.8℉ Ear temperature mode: 0.0℃/32.0℉ &lt;= t &lt;37.6℃/99.8℉, there shall be one long ring and green backlit for 3 seconds.</td>
</tr>
<tr>
<td>2. Measurement of ear temperature</td>
<td>2. Press button F2 within 4 seconds and release it under shutdown state. It shall display measured value, which is under ear temperature mode.</td>
<td>2. Forehead temperature mode: 37.6℃/99.6℉ &lt;= t &lt;42.2℃/107.9℉ Ear temperature mode: 37.6℃/99.6℉ &lt;= t &lt;100℃/212℉, there shall be 7 short ticks and green backlit for 3 seconds.</td>
</tr>
</tbody>
</table>

- 36.8℃