

Medical Device Depot
Inc.

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VeraTemp+™ Professional Non-Contact Thermometer



By Brooklands Inc.

READ INSTRUCTIONS BEFORE USE

DESCRIPTION

The *VeraTemp+*™ Professional Non-Contact Thermometer is a hand held, battery-powered device that is intended for the intermittent measurement and monitoring of human body temperature in any age patient. It measures the infrared energy emitted from the skin surface of the forehead. Because there is no need to touch the skin, the *VeraTemp+*™ is hygienic and there is no need for probe covers.

INTENDED USE

The *VeraTemp+*™ Professional Non-Contact Thermometer is an infrared thermometer for body surface and forehead temperature measurements in Infants, Children, and Adults that does not require any skin contact. It is manufactured in accordance with ASTM E1965-98 Standard specifications for infrared, thermometers for intermittent determination of patient temperature in a clinical environment.

IMPORTANT SAFETY INSTRUCTIONS

Basic safety precautions should always be followed.

- Read instructions before use, and use thermometer only as described in this manual.

- Do not drop or expose to electrical shocks.
- Ambient temperature range for the thermometer is 10°C to 40°C (50°F to 104°F).
- Use in a clean and dry area where it will not become excessively cold or hot, i.e., temperatures less than -10°C or greater than 50°C (less than 14°F or greater than 122°F).
- Do not use outdoors or near a fireplace or stove.
- Do not attempt to sterilize the thermometer.
- The lens of the infrared sensor is the most fragile part. Do not touch the glass of the infrared sensor with your fingers.
- If necessary, clean the glass surface of the infrared sensor with a cotton swab dipped in 70% isopropyl alcohol.
- Do not use this thermometer if it is not functioning properly, or if it has been exposed to extreme conditions, damaged, immersed in water, or exposed to electrical shocks.
- The only service you can perform on the device is to change the batteries. When doing so follow the

instructions in this manual. Do not attempt to repair this device yourself. DO NOT dismantle the device. If a problem occurs with your device, call +1-561-994-2536 or visit www.brooklandsinc.com

- Remove batteries if a long period will occur between uses.
- Dispose batteries properly. Batteries may explode if overheated.

INTRODUCTION

Thank you for buying the *VeraTemp+*[™] Professional Non-Contact Thermometer, which has been developed using the latest most advanced technology. This technology allows a forehead temperature to be taken from a distance of about 5-8 cm (2-3 inches). *The VeraTemp+*[™] provides an instantaneous, accurate and hygienic temperature measurement without touching the patient. As with all types of thermometers it is essential to use the *VeraTemp+*[™] Professional Non-Contact Thermometer properly to obtain reliable results. You are advised to read this instruction manual and follow directions carefully.

The *VeraTemp+*™ Professional Non- Contact Thermometer is calibrated at the factory before shipping. No calibration is necessary.

If there is a significant change in the surrounding temperature, allow the thermometer to adjust to the “new” temperature for at least 15 minutes before use in order to obtain a reliable result.

It is important to allow at least 5 seconds before repeating, or taking a new temperature measurement. This is the approximate time that the result remains on the display after a reading is taken.

Body Temperature and Where It’s Measured

Body temperature is a measure of the body’s ability to generate and dissipate heat. In spite of large temperature variations in the environment, the body is able to control its temperature within a narrow range.

When one is hot, the blood vessels in the skin dilate and carry the excess heat to the skin surface. You begin to sweat and as the sweat evaporates it helps to cool the body. Conversely, when the body is cold, the blood flow to the skin is decreased allowing conservation of body heat. The involuntary act of shivering causes the muscles to generate more heat that can be conserved. Under normal conditions, these reactions of the body to hot and cold keep body temperature within a narrow safe range.

Body temperature can be measured in many locations of the body. Most commonly temperature measurements are taken in the mouth, ear, armpit or rectum. For convenience and accuracy, an ideal place to measure temperature is the forehead.

Normal Body Temperature

Body temperature is an characteristic of a person's metabolic condition and therefore an indication of health. Traditionally, an oral temperature of $37^{\circ}\text{C}/98.6^{\circ}\text{F}$ has been considered "normal" body temperature. In fact, this figure is a result of a centuries old study indicating the average

temperature of the study group. Body temperature is individual to the person and can vary on a healthy person by more than +/- 1°C from 37°C (98.6°F). Your body temperature is influenced by many factors including but not limited to the time of day, gender, age, ambient temperature and metabolic activity.

Because of heat loss from various parts of the body that are not covered by clothing, the normal temperature measured on a person's forehead is usually lower than covered parts of the body. The *VeraTemp+*[™] Professional Non-Contact Thermometer's internal software automatically adjusts the temperature to provide a reading which approximates the body temperature.

American Society for Testing and Materials (ASTM) accuracy requirements in the display range of 98°F–102°F (37°C–39°C) for infrared thermometers is +/- 0.4 °F (+/-0.2 °C), whereas for mercury-in-glass and electronic thermometers, the requirement per ASTM Standards E667–86 and E1112–86 is +/- 0.2°F (+/-0.1 °C).

This infrared thermometer meets requirements established in ASTM Standard (E1965-98). Full responsibility for the conformance of this product to the standard is assumed by Brooklands Incorporated

Examples of Body Temperature Measurement Ranges

Method	Fahrenheit	Celsius
Rectal	97.9°F – 100.4°F	36.1°C – 38.0°C
Tympanic (inner ear)	96.4°F – 100.4°F	35.8°C – 38.0°C
Oral	95.9°F – 99.5°F	35.5°C – 37.5°C
Axillary (Armpit)	94.5°F – 99.1°F	34.7°C – 37.3°C
Forehead	95.0°F – 100.4°F	35.0°C – 38.0°C

Normal Body Temperatures and Age

Age	Fahrenheit	Celsius
0 to 2 years	97.5°F – 100.4°F	36.4°C – 38.0°C
3 to 10 years	97.0°F – 100.0°F	36.1°C – 37.8°C
11 to 65 years	96.6°F – 99.7°F	35.9°C – 37.6°C
65 years and older	96.4°F – 99.5°F	35.8°C – 37.5°C

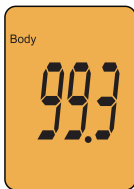
OPERATING PRINCIPLES

All objects radiate infrared energy. The intensity of this infrared energy depends on the temperature of the object. The *VeraTemp+™ Professional Non-Contact Thermometer* measures the temperature of a person based on the energy they radiate. This measurement is taken by the external temperature probe on the device which constantly analyzes and registers the ambient temperature. When the operator holds the thermometer about 5-8 cm (2-3 inches) from the forehead and activates the radiation sensor, the measurement is instantaneously taken.

Before using, familiarize yourself with the device.

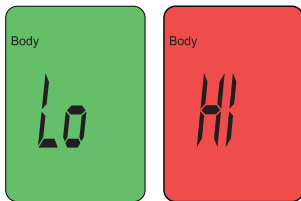
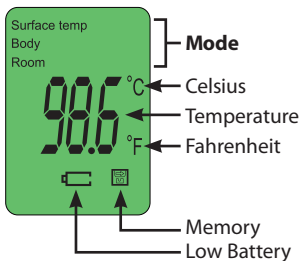
- To measure a body temperature, point the VeraTemp 2-3 inches 5–8 cm away from the patient's forehead and press the scan button
- There is no need to continue to hold the scan button down
- The temperature will instantly be displayed on the screen
- The screen will be **green** when the measured temperature is between 36.3°C and 37.3°C (97.3°F to 99.1°F)

- The screen will be **orange** when the measured temperature is between 37.4°C and 37.9°C (99.3°F to 100.2°F).
- The screen will be **red** when the measured temperature is greater than 38°C (100.4°F).
- The temperature display will remain lit for about 5 seconds after the button is released. After the display has shut off another temperature reading can be taken.



Features

- Specially designed to take the body temperature of a person regardless of the room temperature.
- Screen color changes related to temperature.
- Last 32 readings are automatically stored in memory.
- Backlit LCD screen, easy to read in a dark room.
- Temperature displayed in either Fahrenheit or Celsius.
- Automatic off to prolong battery life.
- Small and convenient to use.
- Body mode: human body temperature measurement 32°C to 42.9°C. (90°F to 109°F)



Temperature is out of range
(too low or too high)

Display background color:

• **Green:**

Between 36.3°C to 37.3°C
(97.3°F and 99.1°F)

• **Orange:**

Between 37.4°C to 37.9°C
(99.3°F and 100.2°F)

• **Red:**

Greater than 38°C (100.4°F)

The color change of the display is to alert the user of a potential increase in body temperature. Temperature reported on the display should be used for treatment decisions.

NOTE: The thermometer is set to "Body" mode at the factory.

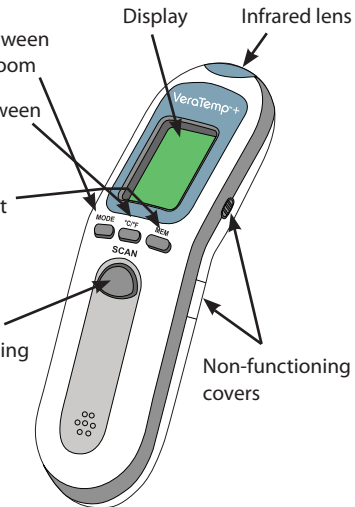
Front:

MODE: Press to switch between Surface temp, Body and Room

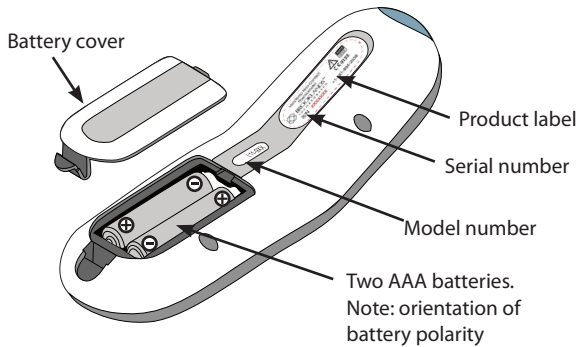
°C/ °F: Press to switch between Celsius and Fahrenheit

MEM: Press to retrieve the last 32 readings, from most recent to oldest

SCAN: Press to view and record a temperature reading



Back:



Practical Considerations When Taking Temperature

- To ensure accurate temperature measurements, it is essential that each user has received adequate information about the device and its proper use.
- Take temperature in a neutral context. The patient must not have undertaken vigorous physical activity prior to temperature measurement. Also the room temperature should be moderate 10°C to 40°C (50°F to 104°F) .
- When evaluating results consider the potential for daily variations in temperature:
 - » In children less than 6 months of age daily variation is small.
 - » In children 6 months to 2 years old the variation is about 1 degree.

- » By age 6 variations gradually increase to 2 degrees per day.
- » In adults there is less body temperature variation.

To Receive a Stable Reliable Result

- Push back any hair from the forehead.
- Wipe away any perspiration on the forehead.
- Avoid drafts.
- Allow a 5 second interval between temperature measurements.
- If there is a significant change in the surrounding temperature, allow the thermometer to adjust to the “new” ambient temperature for at least 15 minutes before use.

Initial Setup

1. Remove battery door and install two AAA batteries.
When batteries are new wait about 10 minutes before taking first reading.
2. Remove the display's protective film.

How to Take a Temperature

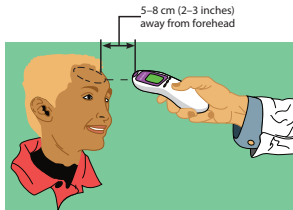
1. Before taking a temperature, ensure the forehead is free of perspiration and that hair has been moved aside.
2. With the thermometer about 5–8 cm (2–3 inches), or about 3 finger's width away from the forehead, press the **SCAN** button. The temperature is displayed instantly.




The reliability of body temperature measurement cannot be guaranteed if measured over another part of the body (i.e. arm, torso, behind ear, etc.)

Common Errors

- If the temperature appears low, check the **MODE**.
If attempting a **BODY** temperature in the **SURFACE** Temperature mode, Temperature may read 6-8°F lower than actual.



- If the screen displays  while on **BODY** mode, you may be pressing the **SCAN** button before aiming at the patient's forehead.

- If multiple attempts display the same results, you may not be waiting the 5 seconds between uses to allow the previous temperature to be completed.
- To check previous temperatures, the memory function (**MEM**) records the previous 32 scans with the temperature reading and the mode in which it was taken.

Technical Characteristics

1. Operating Temperature Range: 10°C to 40°C (50°F to 104°F) and < 85% relative humidity
2. Temperature Measurement Ranges:
 - » Body mode – human body temperature measurement 32°C to 42.9°C(89.6°F to 109°F).
3. Power: DC 3 volt (two AAA batteries)
4. Size: .49 mm x 161 mm x 41 mm (1.9 in. x 6.4 in. x 1.6 in.)
5. Weight: 85 g. (3 oz) without batteries
6. Display resolution: 0.1°C (0.1°F)
7. Precision: from 36°C to 39°C +/- 0.2°C (96.8°F to 102.2°F +/- 0.4°F)
8. Consumption: ≤ 50mW.
9. Accuracy: +/- 0.2°C (0.4°F).
10. Measuring distance: 5 cm to 8 cm (2–3 inches).
11. Automatic shut-off: 5 seconds after reading.

NOTE: Although The *VeraTemp+™ Professional Non-Contact Thermometer* can measure temperature below 32°C and above 42.9°C (89.6°F to 109°F) these temperature are outside the range in which the precision is gauranteed

Accessories Supplied

- User manual
- Quick start card
- Storage bag
- Two AAA batteries
- DuraSleeve
- Lanyard

