SOVARCATE HS980E

SOVARCATE Digital Infrared Laser Thermometer

Model: HS980E

Introduction

This user manual provides comprehensive instructions for the safe and effective operation of your SOVARCATE Digital Infrared Laser Thermometer, Model HS980E. This non-contact thermometer is designed for measuring surface temperatures of various inanimate objects across a wide range, from -58°F to 1112°F (-50°C to 600°C). It features adjustable emissivity, a high/low temperature alarm, and a clear LCD display, making it suitable for applications such as cooking, automotive maintenance, HVAC, and general home use.

Important Safety Information

WARNING: This device is NOT intended for measuring human or animal body temperature. It is a non-medical device designed for industrial and household surface temperature measurements only.

- Do not point the laser directly at eyes or indirectly off reflective surfaces.
- Keep the device away from electromagnetic fields generated by arc welders or induction heaters.
- Avoid exposing the device to extreme temperatures or humidity.
- Do not immerse the device in water.
- If the device is damaged, do not operate it. Contact customer support.

Product Components and Overview

Your SOVARCATE Infrared Thermometer package includes the following items:

- 1 x SOVARCATE Infrared Thermometer (Model HS980E)
- 1 x User Manual
- 2 x AAA Batteries
- Exquisite Packaging

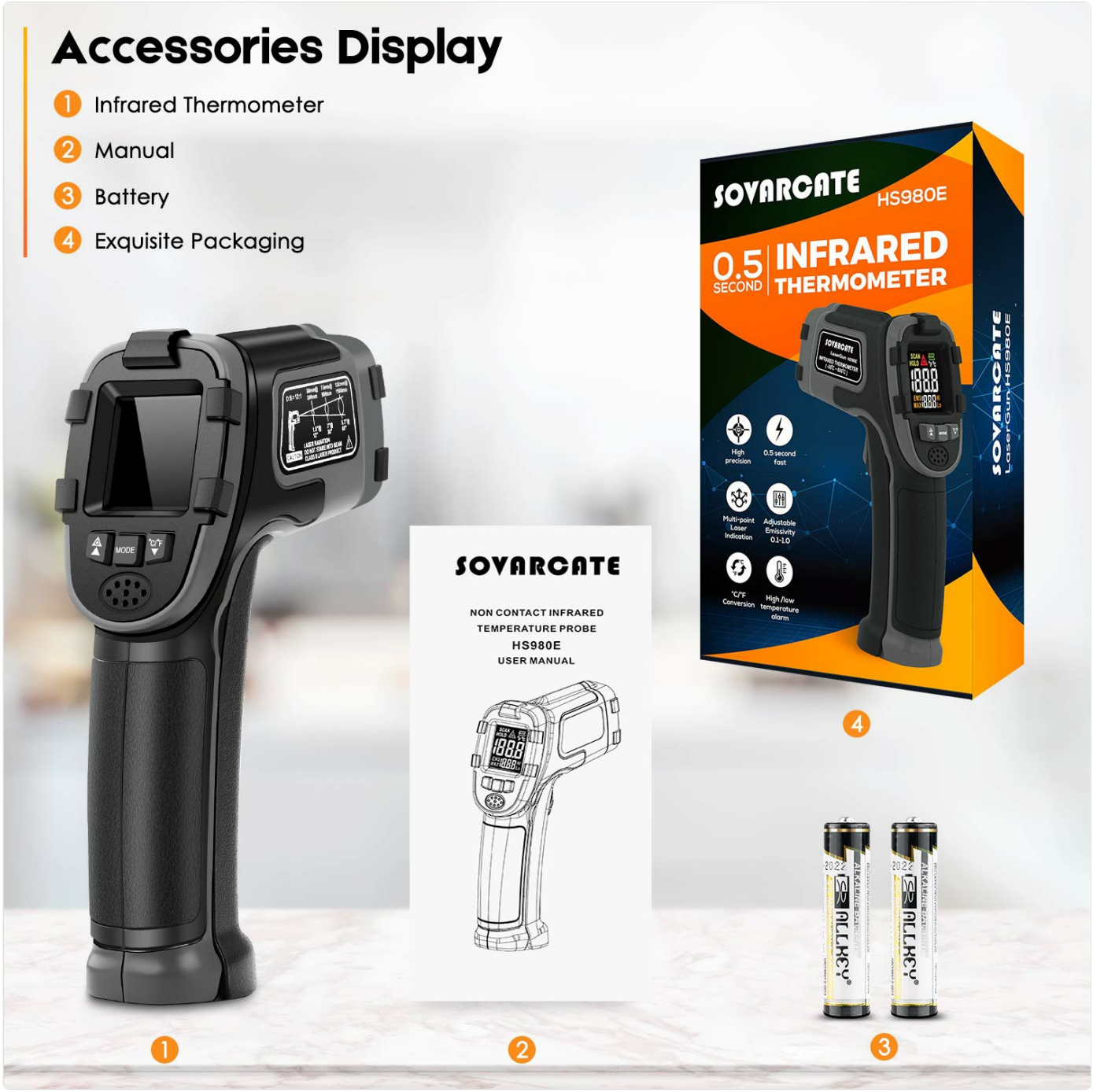

Image: The SOVARCATE Infrared Thermometer, user manual, and two AAA batteries, all within its packaging.

Familiarize yourself with the parts of your thermometer:

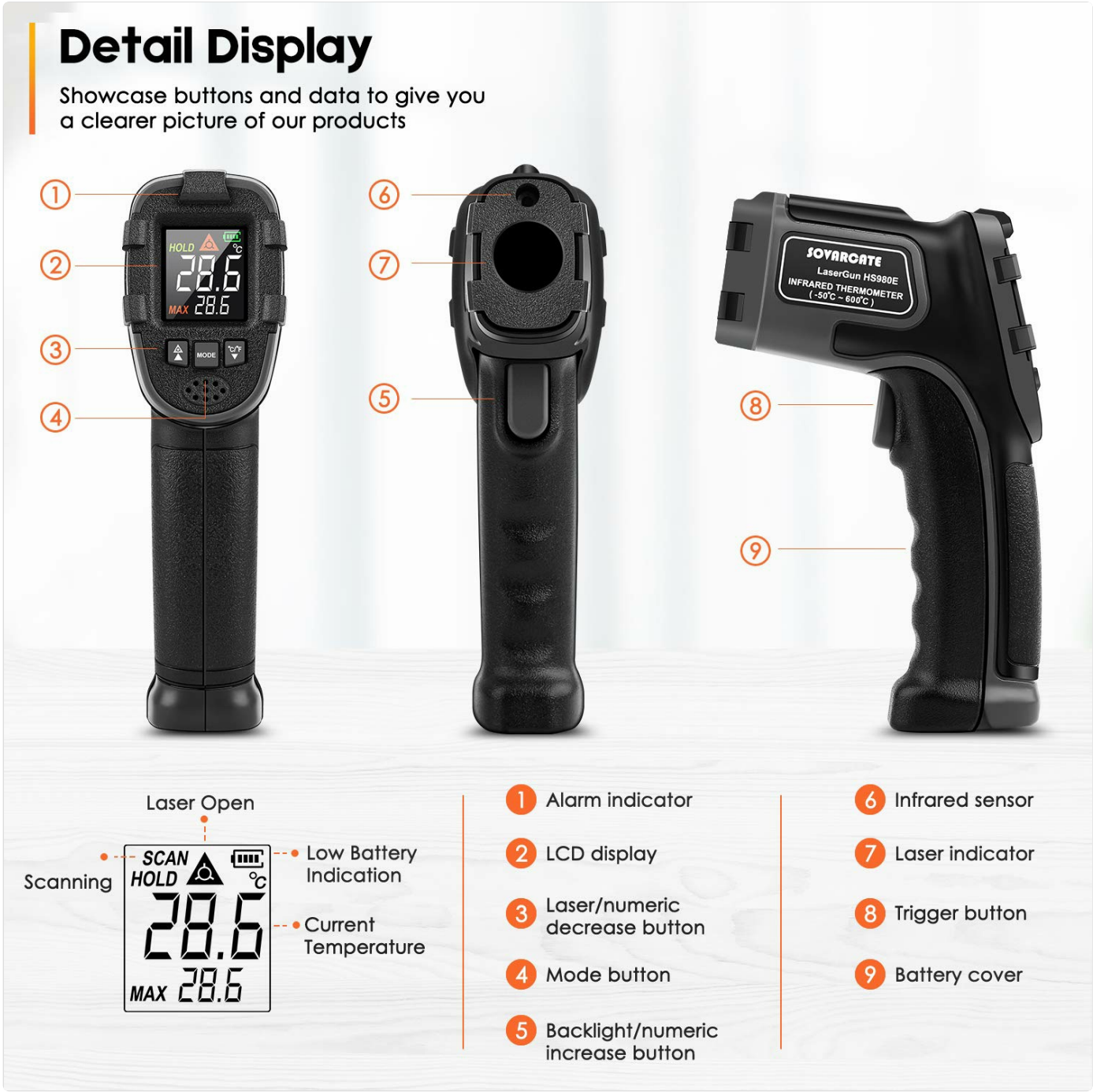

Image: Detailed view of the thermometer showing its components: 1. Alarm indicator, 2. LCD display, 3. Laser/numeric decrease button, 4. Mode button, 5. Backlight/numeric increase button, 6. Infrared sensor, 7. Laser indicator, 8. Trigger button, 9. Battery cover.

Setup

Battery Installation

The thermometer requires 2 AAA batteries (included). Follow these steps to install them:

1. Locate the battery cover (9) on the handle of the thermometer.
2. Open the battery cover by gently sliding or lifting it.
3. Insert the two AAA batteries, ensuring correct polarity (+/-) as indicated inside the compartment.
4. Close the battery cover securely.

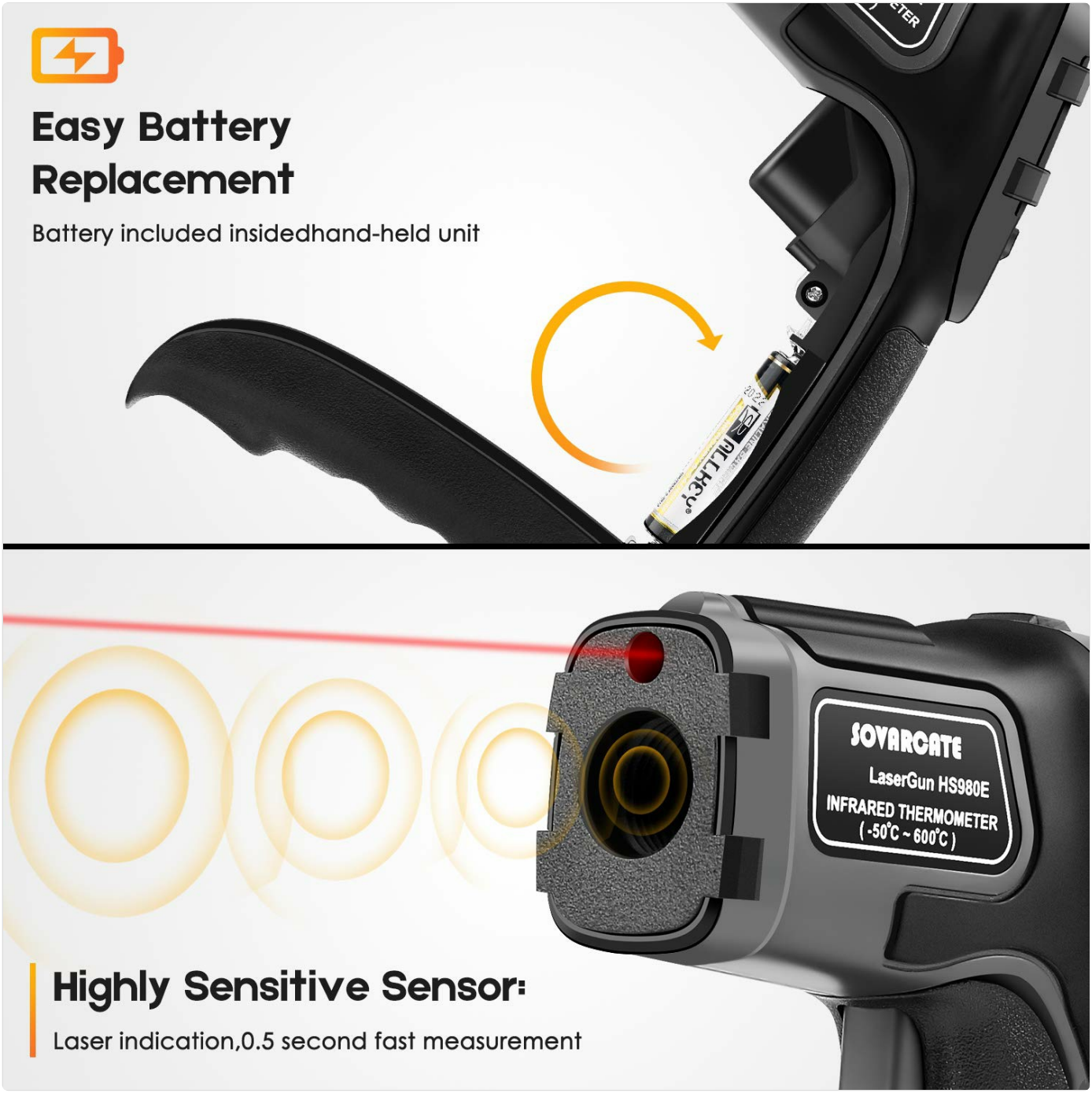

Image: A visual guide demonstrating how to open the battery compartment and insert AAA batteries into the thermometer's handle.

Operating Instructions

Taking a Measurement

1. Point the infrared sensor (6) towards the object you wish to measure.
2. Press and hold the trigger button (8). The laser indicator (7) will activate, showing the approximate measurement area.
3. The current temperature will be displayed on the LCD screen (2).
4. Release the trigger button to hold the displayed temperature reading. The device will automatically shut off after a period of inactivity to conserve battery.

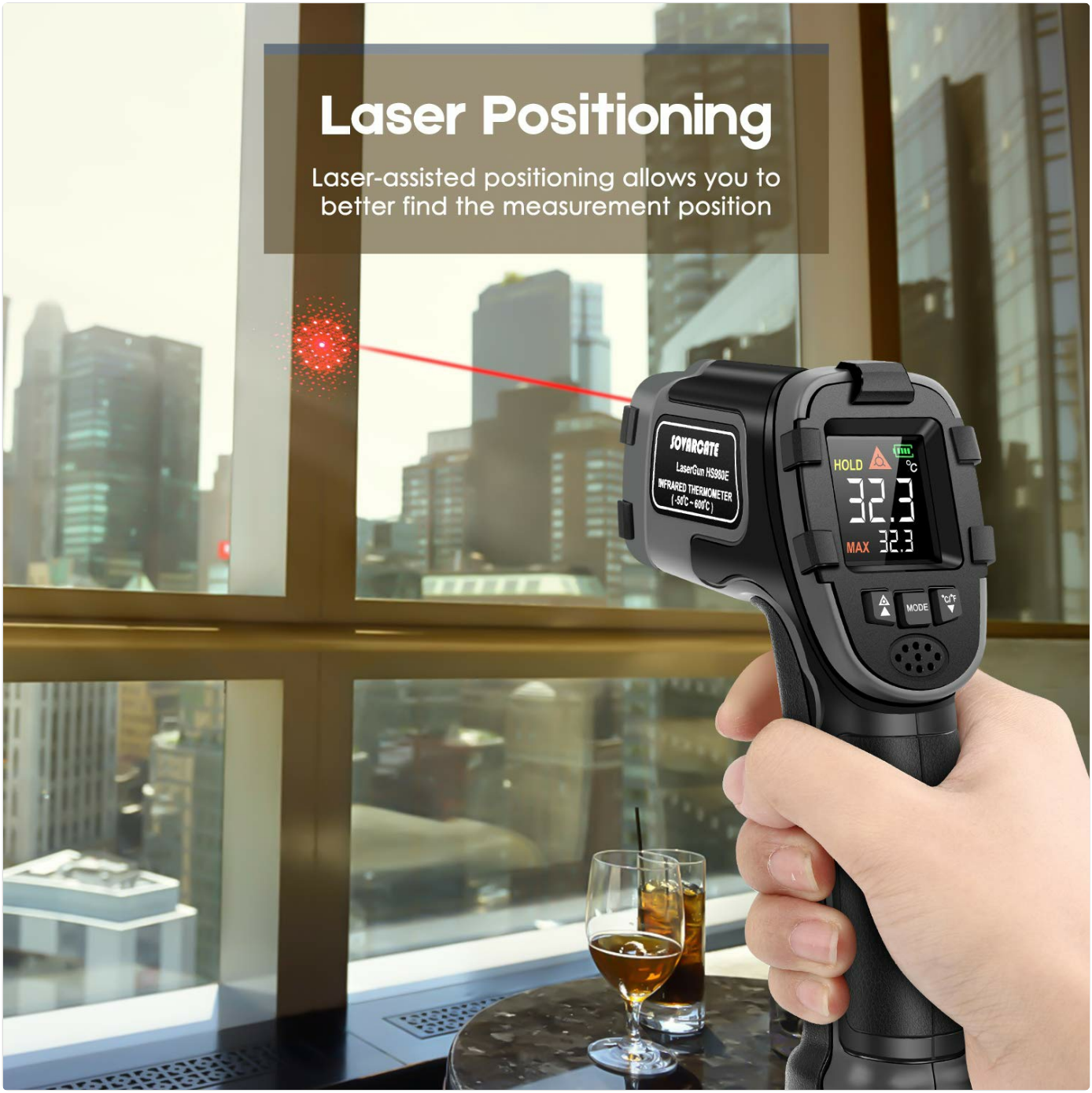

Image: The thermometer being used to measure a distant object, with the red laser dot indicating the target area for measurement.

The measurement range for this device is -58°F to 1112°F (-50°C to 600°C).

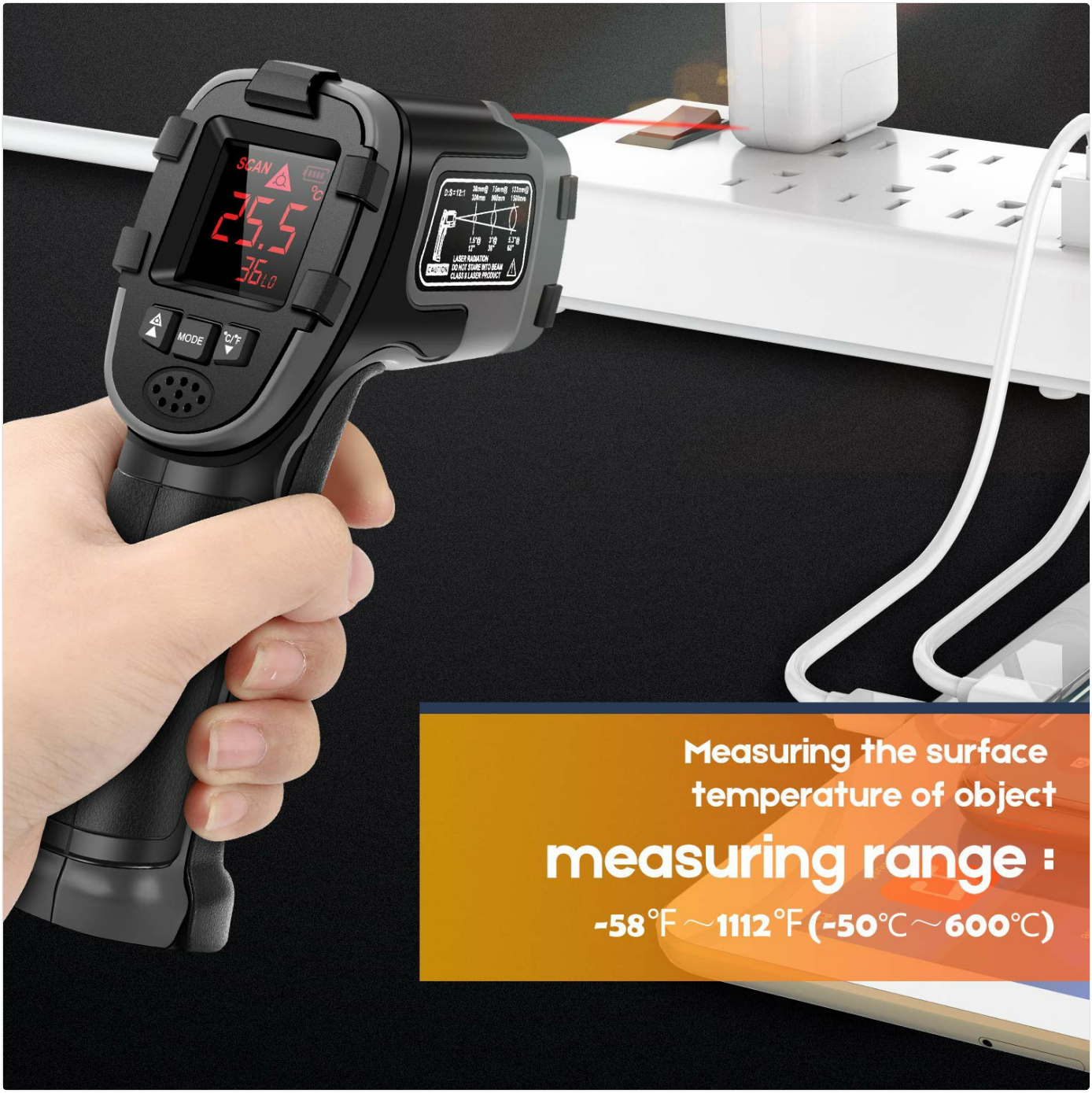

Image: The thermometer displaying a temperature reading, with text indicating its measurement range of -58°F to 1112°F (-50°C to 600°C).

Adjusting Emissivity

Emissivity is a crucial setting for accurate temperature measurement of different surfaces. The adjustable range is 0.1 to 1.0. To adjust:

1. Press the "MODE" button (4) until "EMS" appears on the display.
2. Use the increase (5) and decrease (3) buttons to set the desired emissivity value. Refer to common emissivity values for various materials (e.g., 0.95 for most organic materials, painted surfaces; 0.89 for ice).
3. Press the "MODE" button again to confirm and exit.

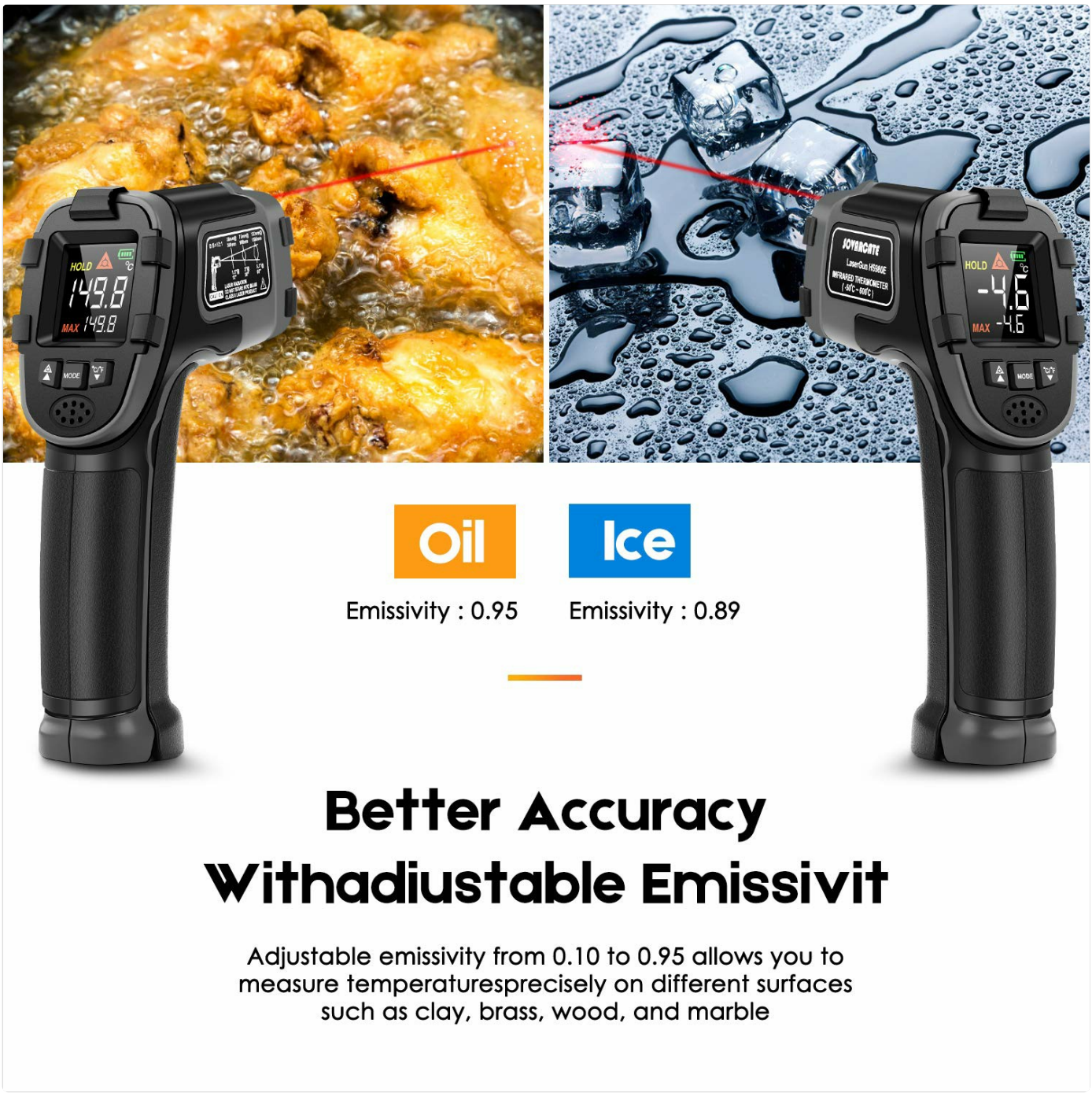

Image: Two thermometers displaying different emissivity settings for measuring oil (0.95) and ice (0.89), highlighting the importance of adjusting emissivity for accuracy.

Temperature Unit Conversion (°C/°F)

To switch between Celsius and Fahrenheit:

- While the device is on, press the "MODE" button (4) repeatedly until the °C or °F symbol flashes.
- Use the increase (5) or decrease (3) buttons to select your preferred unit.
- Press the "MODE" button again to confirm.

High and Low Temperature Alarm

The thermometer features a high and low temperature alarm. When the measured temperature exceeds or falls below the set thresholds, the alarm indicator (1) will turn red.

1. Press the "MODE" button (4) until "HAL" (High Alarm) or "LAL" (Low Alarm) appears.
2. Use the increase (5) and decrease (3) buttons to set the desired high or low temperature threshold.

3. Press the "MODE" button again to save the setting and cycle through other modes.

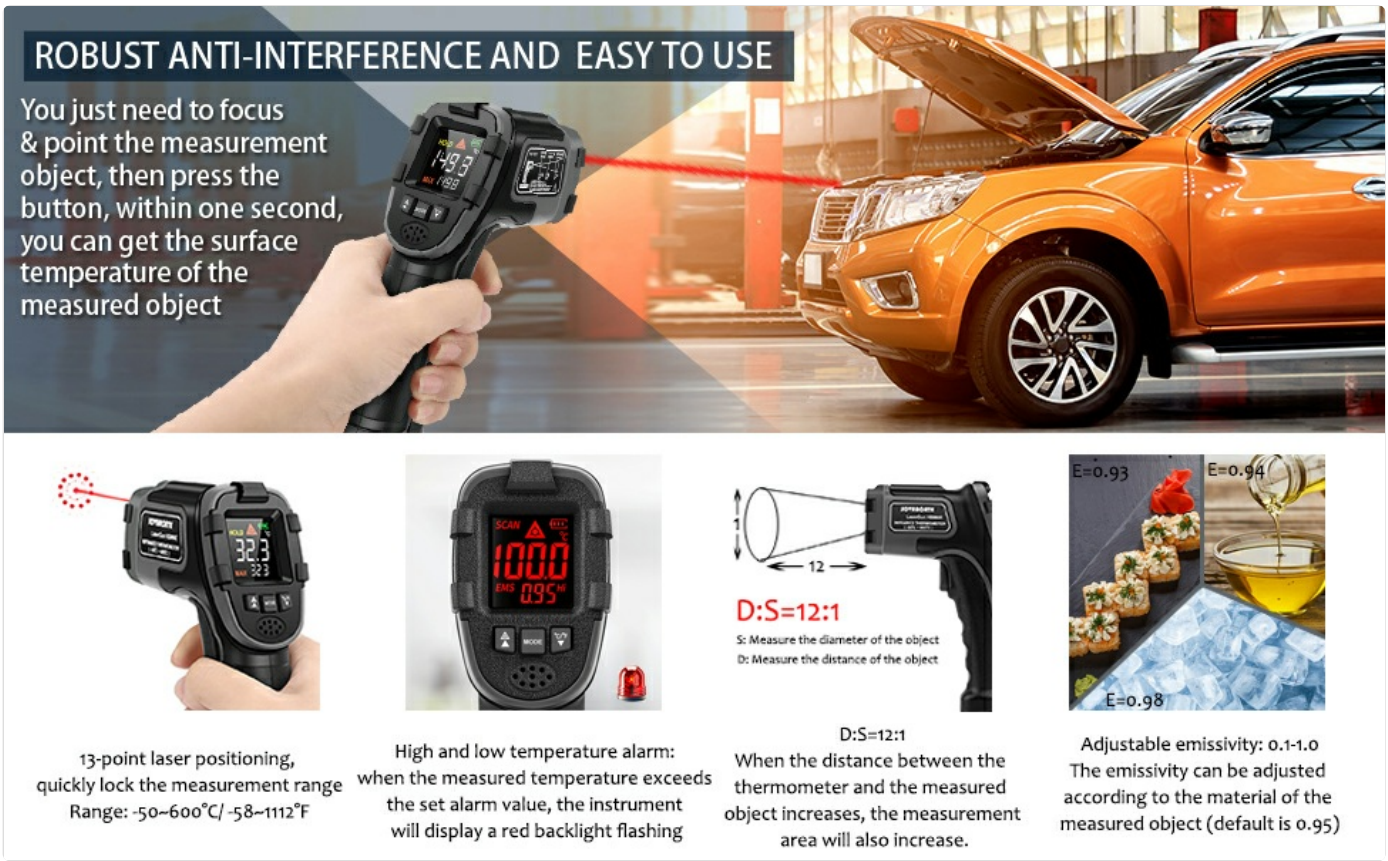

Image: A composite image illustrating the thermometer's robust design, ease of use, 13-point laser positioning, high and low temperature alarm, distance-to-spot ratio (D:S=12:1), and adjustable emissivity range (0.1-1.0).

Maintenance

Cleaning

To ensure accurate readings and prolong the life of your thermometer, keep the lens and sensor clean. Use a soft, damp cloth to wipe the device. Do not use abrasive cleaners or immerse the device in water.

Battery Replacement

When the low battery indicator appears on the LCD display, replace the AAA batteries as described in the "Setup" section.

Troubleshooting

Problem	Possible Cause	Solution
No display/Device won't turn on	Dead or incorrectly installed batteries.	Replace batteries, ensuring correct polarity.
Inaccurate readings	Incorrect emissivity setting; Sensor lens dirty; Object too far or too small.	Adjust emissivity; Clean sensor lens; Ensure proper distance-to-spot ratio (12:1) and target size.
Laser not visible	Laser function turned off; Bright ambient light.	Check mode settings to ensure laser is enabled; Use in less bright conditions if possible.

Problem	Possible Cause	Solution
Alarm indicator always red	Measured temperature is outside set high/low alarm limits.	Adjust high/low alarm settings or verify if the temperature is genuinely outside the desired range.

Specifications

Feature	Detail
Temperature Range	-58°F to 1112°F (-50°C to 600°C)
Accuracy	±2% or 2°C (±3.6°F)
Distance Spot Ratio (D:S)	12:1
Emissivity	Adjustable 0.1 - 1.0
Response Time	0.5 seconds
Spectral Response	8-14 µm
Power Source	2 x AAA Batteries (included)
Auto Shut-off	Yes
Display Type	LCD with Backlight
Material	Acrylonitrile Butadiene Styrene
Dimensions	19.1 x 11.3 x 5.2 cm
Weight	230 g

Warranty and Support

SOVARCATE products are manufactured to high-quality standards. For warranty information or technical support, please refer to the contact details provided with your purchase or visit the official SOVARCATE website. Please retain your proof of purchase for any warranty claims.
For further assistance, please contact SOVARCATE customer service.

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question