BIOS Professional

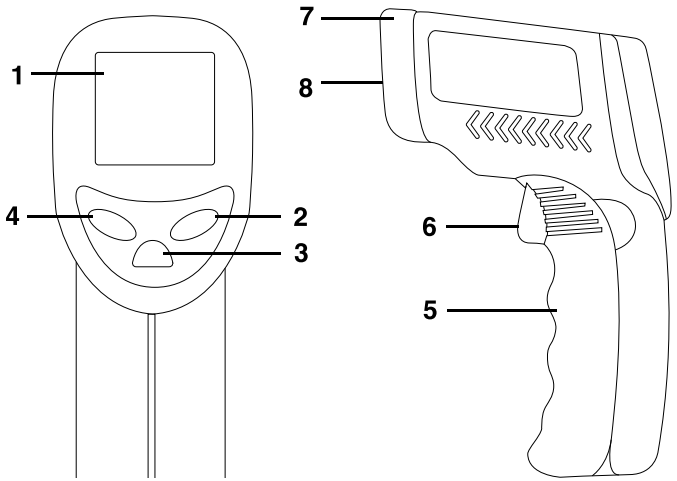
PS199
INFRARED THERMOMETER INSTRUCTIONS

This professional food safety thermometer uses infrared technology to offer the convenience of instant non-contact surface scanning. Simply aim and push the button. This thermometer reads surface temperatures in less than a second. This unit safely measures surface temperatures of hot, hazardous, or hard to reach objects without contact.

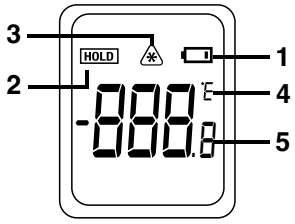
⚠ CAUTION

1. When device is in use, **do not** look directly into the laser beam as permanent eye damage may result.
2. **Do not** leave the unit near objects of high temperature.
3. Use caution when operating the laser.
4. Never point the device towards anyone's eyes.
5. Keep out of reach of children.

PRODUCT DIAGRAMS:



1. LCD
2. Backlight button
3. Laser Signal ON/OFF button
4. °C/°F button
5. Battery cover
6. Trigger
7. Laser
8. Infrared lens



1. Low battery symbol
2. Data hold icon
3. Laser signal
4. °C/°F symbol
5. Current temperature

HOW IT WORKS:

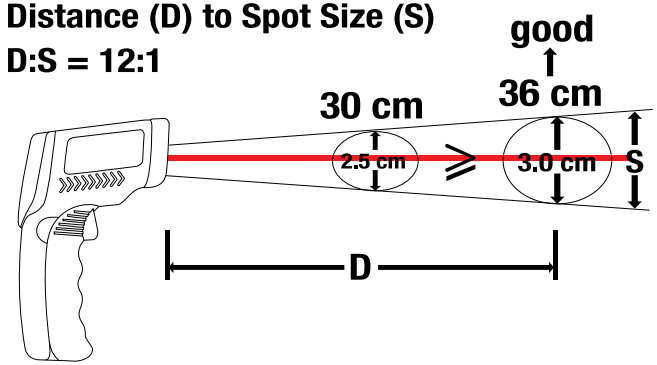
The Infrared Thermometer measures the surface temperature of an object. The laser makes aiming and measurement more precise. The unit's optical sensor emits, reflects, and transmits energy which is collected and focused onto a detector. The unit internally translates this information into a temperature reading which is displayed on the unit.

QUICK START INSTRUCTIONS:

1. Pull battery door clip to open and install battery according to the instructions inside the battery compartment.
2. Press the blue trigger and the LCD display will show the reading and battery icon. Release trigger and the reading will hold for 15 seconds.
3. To find a hot spot, aim the thermometer outside the area of interest. Then scan across the area with up and down motions until you locate the hot spot. Remember to turn on the laser for accurate measuring.

DETAILED OPERATING INSTRUCTIONS:

1. When taking a measurement point the thermometer towards the object to be measured and hold the trigger. The object being tested should be larger than the spot calculator.



2. Distance and spot size: As the distance from the object increases, the spot size of the measuring area becomes larger.
3. Field of view: Make sure the target is larger than the unit's spot size. The smaller the target the closer the measurement distance.
4. Emissivity: Most organic materials, painted or oxidized surface have an emissivity of 0.95 (pre-set in the unit). Inaccurate readings will result from measuring shiny or polished metal surfaces.

SPECIFICATIONS	
Temperature range	-50°C to 280°C/-58°F to 536°F
Accuracy	+/- 2% or 2°C
Resolution	0.1°C (0.1°F)
Responsive time	0.8 seconds
Emissivity	0.95 fixed
Distance to spot ratio	12:1
Spectral response	8-14um
Power	9V battery (included)

STORAGE & CLEANING:

1. Storage Temperature: -20°C to 50°C/-4°F to 122°F
2. Lens cleaning: Use clean compressed air to blow off loose particles. Use a soft brush to remove debris. Then clean it with a wet cloth.
3. Case cleaning: Clean the case with a damp sponge/cloth and mild soap.

Note: Do not use a solvent to clean lenses and **do not** submerge unit in water.

RECOMMENDED METHODS FOR ACCURATE INFRARED THERMOMETER CALIBRATION

Blackbody Calibrator: These devices offer highly stable known temperatures with controlled emissivity, ensuring high-accuracy, traceable results.

Comparator Cup with Contact Probe: This setup uses a high-accuracy contact probe to establish a stable temperature reference, against which the infrared thermometer can be compared.

NOTE: Ice bath calibration is not ideal for infrared thermometers. It is generally unreliable due to several factors:

- Improper ice-to-water ratios or insufficient thermal equilibrium
- Limitations of a single-point calibration method, which doesn't account for performance across a range of temperatures
- The nature of infrared thermometers, which measure surface temperature based on emissivity can be easily affected by environmental conditions.

Annual calibration checks in a laboratory are highly recommended to ensure measurement accuracy. For more information or to book a calibration check, please contact our customer service team.

ONE YEAR WARRANTY:

The Infrared Thermometer has a 1 year warranty to be free of manufacturing defects in materials and workmanship under normal applications of the original owner. If this product becomes inoperable due to defect and requires servicing, return the product with all component pieces and proof of purchase to the address listed below. This warranty does not cover any shipping/transport costs. This warranty does not apply if the product is subject to misuse, neglect, rough handling or damage.

Ship the unit prepaid and insured (at owners option) to:
Thermor Ltd.
Attn: Returns Department
16975 Leslie Street
Newmarket, ON L3Y 9A1
www.biosprofessional.com
Phone: 1-800-387-8520
Email: thermor@thermor-ins.com

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