

AstroAI Infrared Thermometer Manual

Thank you for purchasing the Infrared Thermometer from AstroAI. This infrared thermometer is used for measuring the temperature of an object's surface. Use in hot or hazardous situations safely with a non-contact thermometer. For optimal performance and safety, please read and follow all of the instructions below before operating the device. Please keep this manual for future reference. We hope you enjoy your new Infrared Thermometer!

You are welcome to contact us with your question via support@astroai.com.

WARNING

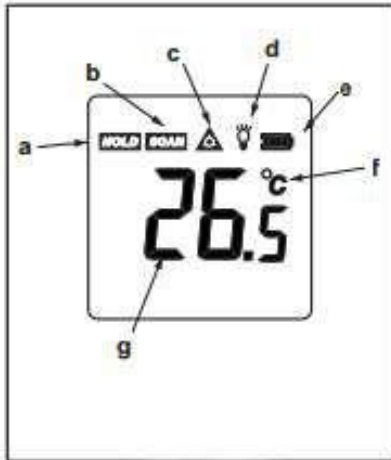
- **BEFORE USE:** Check the plastic housing carefully for any damage. Do not use if plastic housing is damaged.
- **DO NOT** point laser directly in eyes or indirectly off of reflective surfaces.
- **DO NOT** use in environments with explosive gas, steam, or dust.
- **DO NOT** use this product for applications outside of its intended use.
- **AVOID** situations with EMF (Electro-Magnetic Fields) such as arc welders and induction heaters.
- **AVOID** thermal shock caused by large or abrupt ambient temperature changes. Allow at least 30 minutes for unit to stabilize temperature before use.
- **DO NOT** leave unit on or near high-temperature objects.
- Read and follow all instructions before use

FUNCTIONS/FEATURES

1. Switch between Fahrenheit/Celsius
2. Laser-equipped for aim
3. Temperature result hold
4. LCD backlight
5. 7 second auto-off

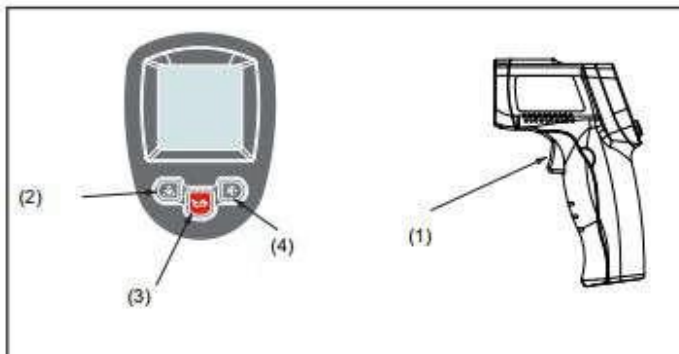
LCD DIAGRAM & Buttons

1. LCD Diagram



- a. Data Hold icon
- b. Scanning icon
- c. Laser On icon
- d. Backlight On icon
- e. Battery Power icon
- f. Temperature Unit indicator
- g. Temperature reading

2. Buttons Diagram



- (1) Trigger
- (2) Laser On/Off button
- (3) Fahrenheit/Celsius button
- (4) Backlight On/Off button

INSTRUCTIONS

Operating:

1. Open the battery door and insert a 9V battery.
2. Press the trigger to turn the unit on.
3. Aim the laser at the target surface and pull trigger.
4. Temperature reading will be displayed on LCD.

Locating a Hot Spot:

1. Press trigger to turn unit on.
2. Aim thermometer outside of the hot spot.
3. Scan across with up and down motion until hot spot is located.

Distance to Spot Ratio

1. Pay close attention to the Distance to Spot Ratio.

2. As the Distance (D) from the target surface increases, the Spot Size (S) of the area being measured becomes larger.
3. The Distance to Spot Ratio of this unit is 12:1. This unit is equipped with a laser, which is used to assist with aiming.

Field of View:

To increase accuracy, make sure the target surface is larger than the Spot Size. When accuracy is critical, make sure the target surface is at least twice as large as the spot size.

Emissivity

Most organic materials and painted or oxidized surfaces have an emissivity of 0.95 (pre-set in the unit). Measuring shiny or polished metal will result in inaccurate readings. To compensate for these inaccuracies:

1. Cover the target surface with masking tape or flat black paint.
2. Allow the tape or paint to reach the same temperature as the target surface.
3. Measure the tape or painted surface.

MAINTENANCE

Lens Cleaning:

1. Blow off loose particles using clean compressed air.
2. Gently brush remaining debris away with a moist cotton swab moistened with water.

Case Cleaning:

1. Clean with a damp sponge/cloth and mild soap.

NOTE:

1. DO NOT use solvents or strong cleaning agents when cleaning plastic lens.
2. DO NOT submerge the unit in water.

SPECIFICATIONS

Temperature Range	-58°F ~ 716°F / -50°C ~ 380°C (For METER380) -58°F ~ 1022°F / -50°C ~ 550°C (For METER550)
Accuracy: Whichever is greater	-50 °C(-58 °F) ~0 °C(32°F): ±3°C(±5°F) 0°C(-32°F) ~380°C(1022°F): ±1.5°C(±2.7°F) or ±1.5% (For METER380) 0°C(-32°F) ~550°C(1022°F): ±1.5°C(±2.7°F) or ±1.5% (For METER550)
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response Time	500mS, 95% response
Spectral Response	8-14um

Emissivity	0.95 Preset
Distance to Spot Ratio	12:1
Operating Temperature	0~40°C (32~104°F)
Operating Humidity	10~95%RH non-condensing, Up to 30°C(86°F)
Storage Temperature	-20~60°C (-4~140°F)
Power	9V Alkaline or NiCd battery
Battery Life	Non-laser mode: 22hrs; Laser mode: 12hrs
Weight	176g
Dimensions	163x110x49mm

3 Year Warranty Limited Warranty From AstroAI

Each AstroAI Infrared Thermometer will be free from defects in material and workmanship. This warranty does not cover fuses, disposable batteries and damage from neglect, misuse, contamination, alteration, accident, or abnormal conditions of operation or handling, including overvoltage failures caused by use outside the Thermometer's specified rating, or normal wear and tear of mechanical components. This warranty covers the original purchaser only and is not transferable.

Questions or Concerns? We're happy to help!

support@astroai.com

AstroAI always wants to provide our customers with excellent products as well as customer service. To know more about us, please visit astroai.com.