

# Operation Manual Infrared Thermometer



## Introduction:

The Infrared Thermometer is compact, rugged, and easy to use. Simply aim and push the button. The thermometer reads surface temperatures in less than a second. Safely measures surface temperatures of hot, hazardous, or hard to reach objects without contact.

## 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.

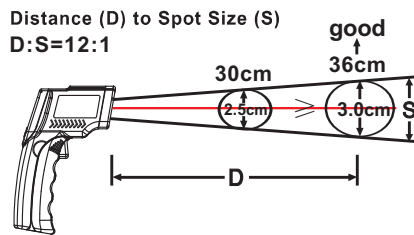
## Quick Start Instructions:

1. Pull battery door clip to open and install battery according to instructions inside the battery compartment.
2. Press the yellow 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 calculated by the field of view diagram (below).



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. When accuracy is critical, make sure the target is at least twice the size of the spot size.
4. Emissivity: Most organic materials, painted or oxidized surfaces have an emissivity of 0.95 (pre-set in the unit). Inaccurate readings will result from measuring shiny or polished metal surfaces. To compensate, cover the surface to be measured with masking tape or flat black paint. Measure the tape or painted surface when the tape or paint reaches the same temperature as the material underneath.

## Diagrams:

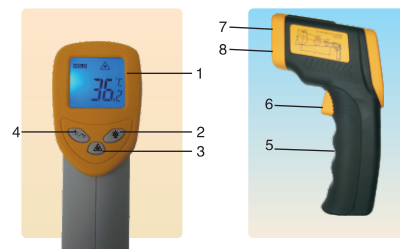


Fig. 1 Temperature Gun:

- ①LCD
- ②Backlight key
- ③Laser key
- ④°C/°F Key
- ⑤Battery Cover
- ⑥Means Key
- ⑦Laser
- ⑧Infrared lens

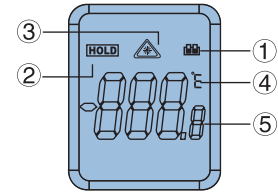


Fig. 2 Indicator:

- ①Low Battery Symbol
- ②Data Hold Icon
- ③Laser Signal
- ④°C/°F Symbol
- ⑤Current Temperature

## Specifications:

- Temperature range: -50°C to +380°C / -58°F to +716°F
- Accuracy: ± 2% or 2°C
- Resolution: 0.1°C (0.1°F)
- Response Time: ≤ 0.8s
- Emissivity: 0.95 fixed
- Distance to Spot Ratio: 12:1
- Spectral Response: 8-14um
- Storage Temperature: -20 to 50°C / -4 to 122°F
- Operating Temperature: 0 to 50°C / 32 to 122°F
- Power: 9V Battery (Included)

## Maintenance:

1. Lens cleaning: Use the clean compressed air to blow off loose particles. Use a soft brush to remove debris. Then clean it with a wet cloth.
2. Case cleaning: Clean the case with a damp sponge/cloth and mild soap.

## Note:

1. Do not use solvent to clean lenses.
2. Do not submerge unit in water.

## Warnings:

- Do not point laser directly or indirectly (through a reflective surface) at eye.
- Do not leave the unit near objects of high temperature.
- Protect Infrared thermometer from the following instances:
  - EMF (electro-magnetic fields) from arc welders and induction heaters.
  - Thermal Shock caused by large or abrupt ambient temperature changes. Unit requires 30min to stabilize before use.

