CONTENTS

1. Safety Information

● Please read the following information carefully before using the meter.

● Safety symbols:-

⚠ Danger/Important Information prompt.

$C\!E$ Comply with CE safety standards.

This instrument is compatible with the following standards:

  EN61326-1

  EN61010-1

  EN60825-1

⚠ **Warning!**
Do not point laser directly at eye or indirectly off reflective surfaces.

2. Precautions

● After abrupt ambient temperature changes, allow instrument temperature to stabilize for 30 minutes before using for measurement.

● Avoid operating near strong electromagnetic fields such as arc welders, induction furnaces, etc.

● Do not expose thermometer to excessive ambient temperatures.

● Keep the thermometer clean and avoid getting dust into the detector's optics.

● Do not use solvents to clean the meter.

3. NAMES OF COMPONENTS

1. Trigger
2. Battery cover
3. LCD display
4. Back light button
5. Ambient temperature button
6. Mode button
7. °C/°F selection button
8. Laser button
9. Collimator
10. Temperature detect hole

11. Laser emission orifice
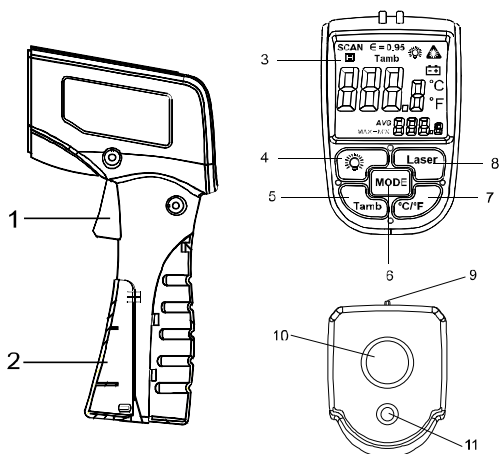
4. LCD illustration
1. Measurement indication
2. Data hold
3. The first temperature display
4. Average value indication

5. MAX/MIN/MAX-MIN value indication
6. Ambient temperature measurement indication
7. Emissivity display
8. Back light indication
9. Laser emission indication
10. Low power indication
11. °C temperature unit
12. °F temperature unit
13. The second temperature display
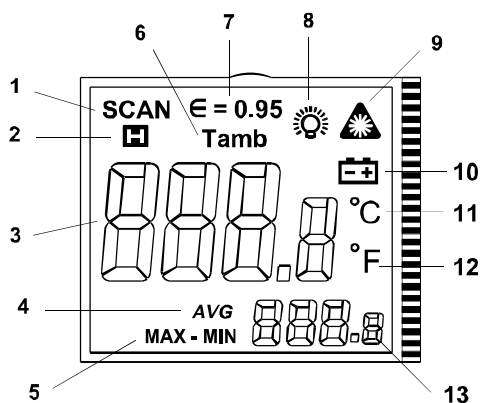
5. Measurement Principle

Infrared thermometers detect infrared energy emitted by objects. The instrument focuses energy through its lens, changing the temperature of a special material that creates an electrical signal. A microcomputer processes this signal and displays the output on the panel of the thermometer. The laser is used only for sighting the instrument and has no other effect on temperature measurement.

6. Measurement Method

1. To measure the temperature of an object, press the trigger to turn on the unit, and then aim the unit at the object and press the trigger. As long as you hold the trigger, you can measure temperature continuously. After releasing the trigger, the LCD will hold the temperature values.

The first display indicates the current value. The second display indicates the calculated (Avg., MAX, MIN or MAX-MIN).

2. Use the laser button to activate the laser for aiming at distant objects.

3. Use the backlight button to illuminate the display in low-light conditions.

4. Press the "MODE" button to change the second temperature display. This display can show AVG (average), MAX (maximum), MIN (minimum) or MAX-MIN (span).

5. Press the °C/°F button to change the unit of measure.

6. To measure the ambient temperature, just press "Tamb" key, and then press the trigger down and keep, you can get the measurement result from LCD directly. After releasing trigger, LCD will hold the measurement result.

NOTE: The first value indicates the temperature of an object; the second value indicates the ambient temperature.

7. Distance to Spot Ratio

The thermometer has an optical angle and spot size as shown below.

Object   Focus tube   Sensor
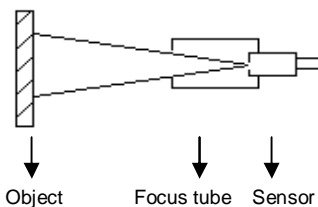
The target should be larger than the unit's optical spot size.   The distance to spot ratio for this thermometer is 8:1 (8mm spot at 1meter) as shown below.


Distance (D)   Spot size (S)
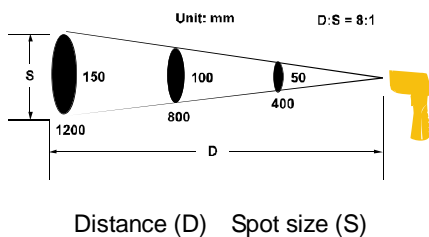
8. Emissivity

Emissivity is a term used to describe the energy emitting characteristics of a material. The higher the emissivity value a material has, the more infrared energy it will emit at a particular temperature. Most organic materials range in emissivity between 0.85 and 0.98. This thermometer has a fixed (non-adjustable) emissivity of 0.95. Measuring objects with an emissivity of less than 0.95 will result in a lower than actual temperature reading on the display. Be aware of this characteristic when measuring low emissivity objects (e.g. shiny, reflective metal objects).

9. Changing the Battery

When the battery is nearly exhausted, the low battery symbol will appear on the display. The battery should be replaced soon after this occurs.

Pinch the both side of the top of the battery cover
to swing it open as shown:
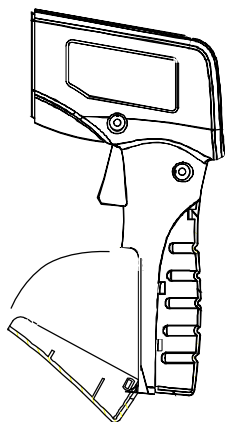
10. SPECIFICATIONS

LCD display: Double temperature 4 digitals LCD
Field of view: 8:1
Emissivity: 0.95
Spectral response: 8 -14 um

Measure range: -50°C ~ 500°C (-58°F ~ 932°F)
Ambient temperature range: 0°C ~ 50°C
Accuracy at ambient of 22°C±2°C:
        -50°C~-20°C:±(5°C/9°F)
     -20°C ~ 500°C ± (reading×1.5% + 2°C/4°F)
Response time: 0.5 second
Laser power: Less than 1 mW
Auto power off: 20 seconds
Backlight: White
Operation surrounding: 0~50°C, 10 ~ 90%RH
Storage surrounding: -10°C ~ 60°C, ≤75%RH
Battery: 9V (6F22)
Size: (Length) 120 × (Width) 45 × (high) 180mm
Weight: Approximately 205g (including battery)
Accessories: Battery 9V, operation manual，bag