COOL-US
User's Manual Mini Infrared Thermometer

1. Introduction

Congratulations on your purchase of our professional non-contact infrared thermometers.

These units can provide fast, easy and accurate temperature readings. With the non-contact (infrared) technology, they can be used to measure the surface temperature of hard-to-reach objects like electrified equipment or moving objects, without any damage or pollution to them.

2. Features

- Fast and easy measurement
- Precise non-contact measurement
- The built-in laser pointer increases the target accuracy
- Max/Min Record
- Backlight LCD display
- Automatic measurement range selection with resolution 0.1℃/℉
- Automatic trigger off
- Auto power off

3. Application

These units are widely used in Food preparation, Safety and Fire inspection, Plastic molding, Asphalt, Marine, Printing ink and dryer temperature, Diesel and Fleet maintenance.

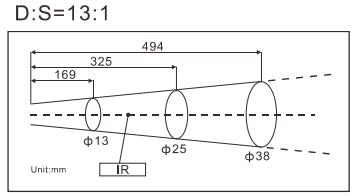
4. Safety

- Use extreme caution when the laser beam is turned on.
- Do not point the beam toward anyone or any animals.
- Do not allow the beam to strike the eye from a reflective surface.
- Do not use the laser near explosive gases.
- **Safety Symbol**

CE Comply with EMC

5. Field of View

The meter's field of view is 13:1, for example, if the meter is 13 inches from the target spot, the diameter of the target must be at least 1 inch. Other distance ratios are show below in the field of view diagram.



6. Specifications

	○	○	○
Range	-50～350℃;-58～662℉	-50～550℃;-58～1022℉	-50～850℃;-58～1562℉
Accuracy	-50℃～0℃: ±4℃	-50℃～0℃：±4℃	-50℃～0℃:±4℃
	0℃～350℃：±2% ±2℃	0℃～550℃：±2% ±2℃	0℃～850℃：±2% ±2℃
Emissivity	fixed at 0.95		
Optical Resolution	D:S=13:1		
Resolution	0.1℃(0.1℉)		
Spectral Response	8～14um		
Polarity Display	Auto display, "-" indicates negative, while positive with no sign.		
Diode Laser	Output＜1mW，630～670nm,class 2(Ⅱ)		
Auto Power Off	Auto shuts off after 20 seconds inactivity		
Operating Temp.	0℃ to 50℃ / 32℉ to 122℉		
Storage Temp.	-20℃ to 60℃ / -4℉ to 140℉		
Relative Humidity	Operating:10～95%RH,Storage:<80%RH		
Power Supply	9V battery		
Dimensions(L*W*H)	155.5*98.8*27.5mm		
Weight	176g		

7. Meter Description

A. Laser pointer beam

B. IR Sensor

C. LCD Display

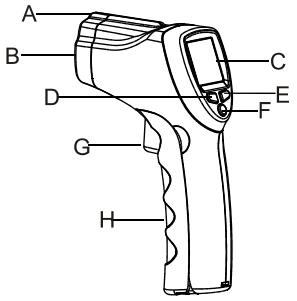
D. ℃/℉ Switch Button

E. MAX/MIN Button

F. Laser Pointer/Backlit Button

G. Measurement Trigger

H. Battery Compartment Cover



8. LCD Display Description

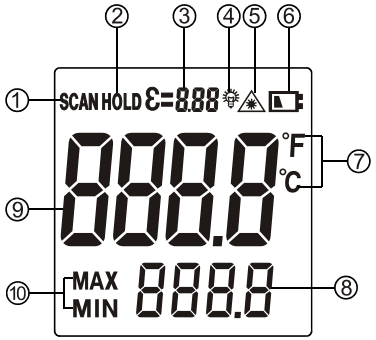
①Measurement Icon　②Data Hold Icon

③Emissivity Icon　④Backlit Icon

⑤Laser Icon　⑥Low Battery Indication

⑦Temperature Unit(℃/℉)　⑧Max/Min Record Reading

⑨Current Reading　⑩Max/Min Icon



9. Operating Instruction

A. Operating steps:

① Hold the meter by its handle grip and point it toward the surface to be measured.

② Pull and hold the Trigger to turn the meter on, the "SCAN" icon will appear and begin testing.

③ The surface temperature being tested will be displayed on the LCD screen.

④ Release the trigger, the "HOLD" icon will appear, and the reading will be hold for several seconds.

⑤ The meter will automatically shut off after 20 seconds.

Measurement Note：

If the meter used in an ambient temperature with wide temperature change, allow it at least 30 minutes to adjust to it.

The laser is designed for aiming only; it can be shut off while operating in short distance to save the battery.

B. Button Function

① ℃/℉button: In Measurement Mode, press button“℃/℉”to switch the temperature unit ℃ or ℉.

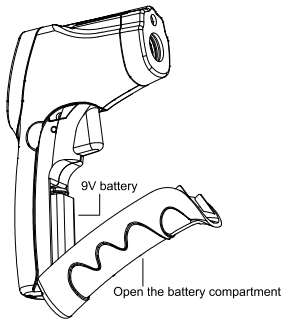
② Laser pointer/Backlight button: In Measurement Mode, press button“”to turn on/off backlight; In “HOLD” Mode，press button“”to turn on/off laser pointer.

③ During measuring，press button“MAX/MIN”to display MAX/MIN readings.

C．Battery Replacement

① When the low battery icon“”appears, replace themeter's battery.

② Open the battery compartment, replace the 9V battery and close the battery compartment cover.



10. Notes

(1) **Work Principle**

- The infrared thermometer is designed for measuring surface temperature of an object.
- The optical sensor can emit, reflect and transmit energy, which is collected and focused on a detector, then translate it into the temperature reading by electronics and displayed on the LCD screen.
- The laser is used for aiming the target object only.

(2) **Field of View**

- The object under test should be larger than the spot size calculated by the field of view diagram.
- The smaller the target object is, the closer the meter should be to it for accurate measuring.
- When accuracy is critical, make sure the target is at least twice as large as the spot size.

(3) **Distance & Spot Size**

- As distance (D) from the object increases, the spot size (S) of the area measured by the unit becomes larger.

(4) **Locating a hot spot**

- To find a hot spot, first aim the thermometer to the outside of target area, then scan across in an up and down motion until the hot spot is located.

(5) **Notice**

- Not recommend for measuring shiny or polished metal surfaces like stainless steel, aluminum, etc.
- Do not make measurement through transparent surface such as glass.
- If the surface of the object under test is covered with frost, oil, grime, etc., clean before taking measurement.

(6) **Maintenance**

- Do not use volatile liquids to clean the unit, swipe it with dry soft cloth.
- Do not disassemble the unit, repair it　by qualified personnel
- Do not immerse it in water.
- Do not store it in high temperature or humidity.

11. Accessories

◯,1 User's manual

◯,2 9V Battery