IR-90 User's Manual
2 IN 1
IR and Contact Infrared Thermometer

1. Introduction

This unit can provide fast, easy and accurate temperature readings.

It is a 2 in 1 thermometer with both non-contact infrared and foldable contact penetration probe; it is mainly used for measuring temperature of food and liquid.

2. Features

◆Fast and precise non-contact infrared and contact measurement

◆Max/Min/Hold function

◆Non-contact continuous measuring

◆Adjustable emissivity: 0.1～1.0

◆Resolution:0.1℃(0.1℉)

◆Auto data hold function

◆Auto power off

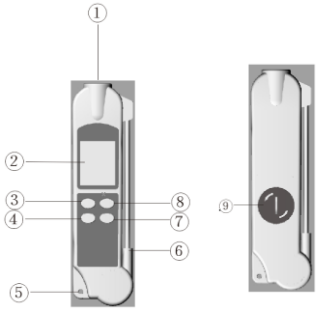
3. Specifications

Range	IR	-35～330°C/-31～626°F
	Probe	-20～260°C/-4～500°F
Accuracy	IR	-35～0°C/-31～32°F:±4°C/7.2°F
		Above 0°C/32°F:±2% of reading±2°C/3.6°F
	Probe	-20~260°C/-4~500°F:±1% of reading±1.5°C/3.6°F
Response Time	IR	< 250 ms
	Probe	< 10s
Optical Resolution		4:1
Emissivity		Adjustable: 0.1～1.0
Resolution		0.1℃(0.1℉)
Spectral Response		8～14um
Polarity Display		Auto display, "-" indicates negative, positive has no sign.
Over-range Indication	LO	HI
Automatic Power Off		After 3 minutes inactivity
Operating Temp.		0°C to 50°C / 32°F to 122°F
Storage Temp.		-20°C to 60°C / -4°F to 140°F
Relative Humidity		Operating:：10 to 95%RH Storage:：＜80% RH
Power Supply		CR2032 1×3.0V
Weight		70g
Probe Size		Ø3.5×108mm
Dimensions(L*W*H)		151×41×20mm

Measurement Note：If the meter is being used in an ambient temperature environment with wide temperature change, please leave the meter for 30 minutes to adjust to the environment before taking measurements.

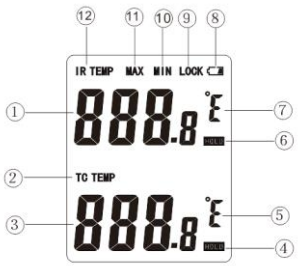
4. Meter Description

1. IR Sensor
2. LCD Display
3. SET Key
4. TC Key
5. String hole
6. Probe
7. IR Key
8. MODE Key
9. Battery cover



5. LCD Description

1. IR reading
2. TC temperature
3. TC reading
4. TC hold symbol
5. Temperature units
6. IR hold symbol
7. Temperature units
8. Battery symbol
9. IR continuous measuring
10. Min
11. MAX
12. IR measuring indication



6. Operating Instruction

1. Operating steps:

① Point the front of the meter towards the surface to be measured.

② Press **IR** button，infra-red temperature appears, in the IR Temp area, on the top half of the LCD display.

③ Insert the metal probe into the object to be tested. Press **TC** button，TC temperature appears in the TC Temp area on the bottom half of the display.

④ Under “HOLD” mode, meter will power off automatically after 3 minutes of no activity

Notes：Under IR mode, TC readings will be held automatically

Under TC mode, IR readings will be held automatically

2．Button Function

2.1 SET Button；under measuring mode. Press “SET” button to change the temperature units

2.2 MODE Button: under “HOLD” mode，press“MODE”button，meter enters into MAX－MIN－LOCK－095ε step by step，press MODE button again to return to normal measuring mode

2.2.1 Press“MODE” button，“MAX” appears on the LCD, meter enters into“MAX” mode. Press **IR** button and only the maximum temperature detected will appear on the display

2.2.2 Press“MODE” button，“MIN” appears on the LCD, meter enters into“MIN” mode. Press **IR** button and only the minimum temperature detected will appear on the display

2.2.3 Press“MODE” button，“LOCK” appears on the LCD, meter enters into“LOCK” mode. This means the meter will continuously take an infra-red temperature without pressing the **IR** button

2.2.4 Press “MODE”, “095ε” appears on the LCD. Press “SET” to adjust the emissivity value

2.3 **IR** Button: Press **IR** button to turn the meter on，press IR button again to take an infra-red reading

2.4 **TC** Button: Press **TC** button to turn the meter on, press **TC** to take a temperature reading with the penetration probe

3. Battery Replacement

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

②Open the battery compartment, replace the 3V battery and close the battery compartment

7. Notes

1) **Field of View**

◆ 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.

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

2) **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.

3) **Notice**

◆ Not recommend for measuring shiny or polished metal surfaces like stainless steel, aluminum, etc.

◆ Do not use to take measurements through transparent surfaces such as glass.

◆ If the surface of the object under test is covered with frost, oil, grime, etc., clean it before taking measurement.

4) **Maintenance**

Do not use volatile liquids to clean the unit, wipe it with dry soft cloth

◆ Do not disassemble the unit

◆ Do not immerse it in water.

◆ Do not store it in high temperature or humidity.

8. Accessories

User's manual

One "CR2032" 3.0V battery

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