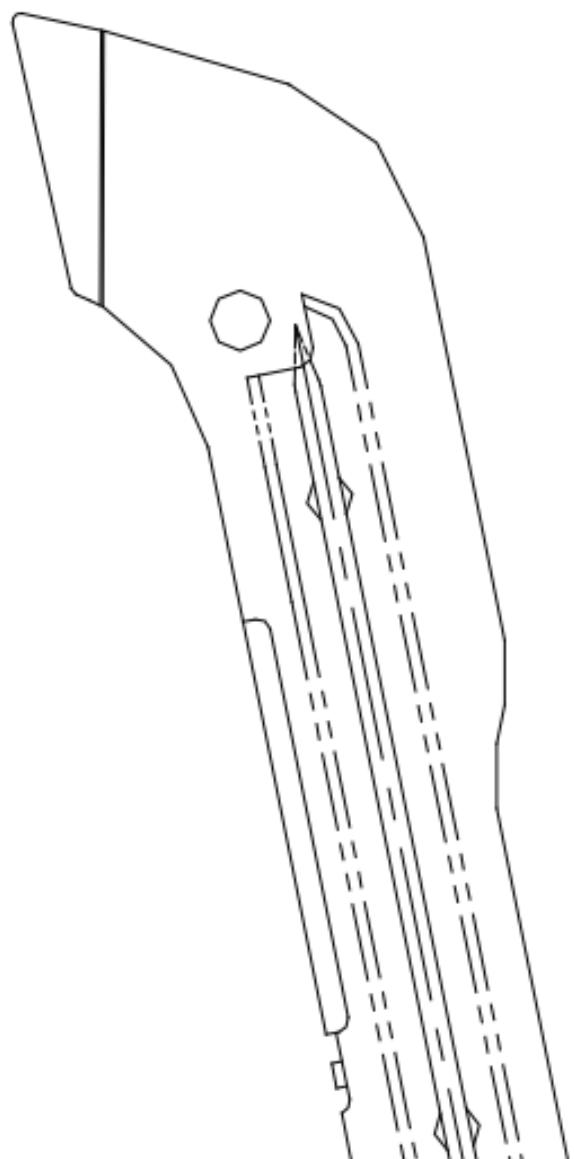


# Noncontact Thermometer With Probe



## USER'S MANUAL

### 1 Introduction

This meter is a convenient non-contact infrared

thermometer with probe.

This thermometer combines two precision thermometers in one unit: a noncontact infrared thermometer and a resistance thermal device penetration probe. The noncontact mode can be used for quick scans of a surface temperature, while the probe mode is used to accurately measure internal temperatures.

## 2 Safety Information

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

 **Warning: Do not point laser directly at eye or reflective surfaces.**

### Cautions:

**When** ambient temperature changes quickly, must wait 30 minutes to balance the heat of the instrument before use.

**Avoiding** EMF(electro magnetic fields) from arc weld, induction furnace, etc...

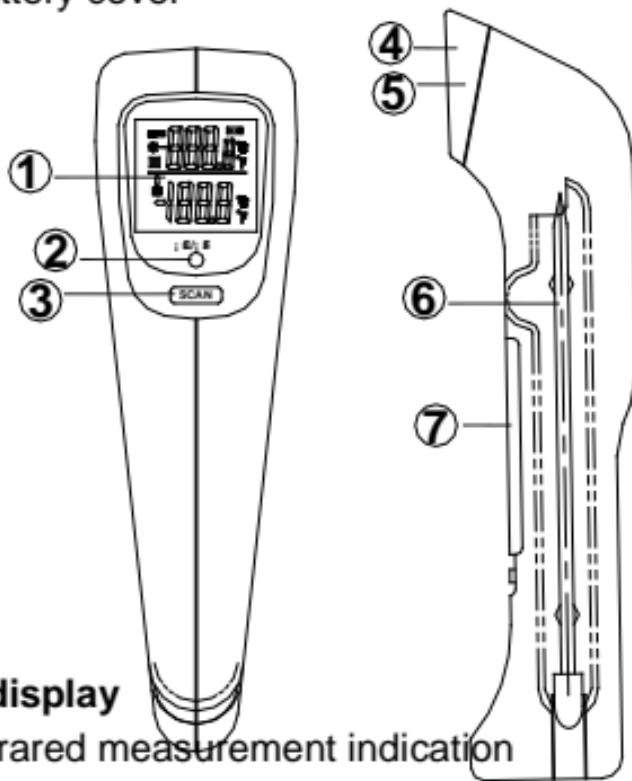
**Do** not leave the unit on or near high temperature objects.

**Keeping** the instrument clean, and do not get dust into detecting hole.

## 3 Name of Components

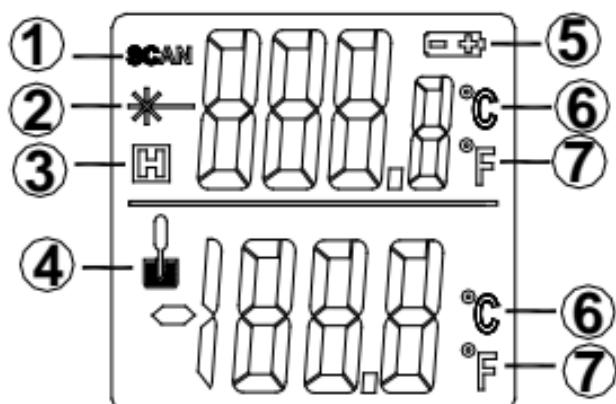
- ① LCD display
- ② °C/°F selection button
- ③ Scan button
- ④ Infrared sensor

- ⑤ Laser targeting aperture
- ⑥ Probe sensor
- ⑦ Battery cover



### LCD display

- ① Infrared measurement indication
- ② Laser indication
- ③ Data hold indication
- ④ Probe measurement indication
- ⑤ Low power indication
- ⑥ °C temperature unit
- ⑦ °F temperature unit



## **4 Specifications**

- Infrared:

Measurement range: -20 °C~270 °C; -4 °F~518 °F

Resolution: 0.1 °C/0.1 °F

Accuracy: -20 °C~0 °C: ±5 °C

0 °C~270 °C: ±(reading×1.5%+3 °C)

Field of view: 6:1

Typical Distance to Target: up to 1m

Laser power: <1mW

Emissirity: 0.97

Over range indication: “OL” or “-OL”

- Probe

measurement range: -50 °C~270 °C; -58 °F~518 °F

Resolution: 0.1 °C(-50 °C~200 °C) ;

1 °C(200 °C~270 °C)

Accuracy: -50 °C~ -20 °C: ±(reading×1.5%+1 °C)

-20 °C~200 °C: ±(reading×1.0%+1 °C)

200 °C~270 °C: ±(reading×2.0%+4 °C)

Measurement Period: 1 time/2 secs

- Operation surrounding:

0~40 °C(Infrared),10~90%RH

0~50 °C(Probe) ,10~90%RH

Storage surrounding: -10 °C~60 °C,≤75%RH

- Auto power off: 30s (Only the Infrared operates),Disabled ( Both the Infrared and probe operate)

- Battery: 1.5V×3(AAA)

- Dimensions: 182(L)×49(W)×43(H) mm
- Weight: 120g. Approx. (battery included)

## **5 Operation Instruction**

### **5-1. Measurement method of the Infrared**

- ① Point the infrared sensor to the object, and then press the “SCAN” button, the unit begins working, and the laser appears.
- ② Read the measured result from the LCD display.
- ③ Release the “SCAN” button, the measured result will hold automatically. The unit automatically turns off after about 30 seconds of inactivity.

To get an accurate measurement result, refer to **D:S ratio**.

**NOTE:** The infrared temperature measurements are used for screening and measuring surface temperatures only. Critical internal temperatures must be verified by using the probe.

If an object surface is very slick, such as stainless steels, the emissivity from surface is low, and the measurement accuracy will be affected. An effective solution is that using the black adhesive tape to cover the object surface, starting the measurement until the adhesive tape's temperature is same as the object.

### **5-2. Measurement method of the probe**

- ① Open the probe to start the unit (Both the Infrared and probe will be turned on).

②The Infrared and the probe are all enabled in this state, but the function of auto power off will be disabled. (the measurement method of the Infrared refer to 5-1)

③Insert the probe at least 12mm(1/2") into the target, then the meter will measure the core temperature automatically.

The probe comes to equilibrium with the object being measured until the LCD reading is almost steady.

When the highest accuracy is required, it is advisable to keep on measuring for a moment after the reading is almost steady to insure the probe has fully stabilized and reached equilibrium with the object.

**NOTE:** The probe tip must be sterilized before and between measurements of food samples to avoid cross contamination.

### 5-3.Other function

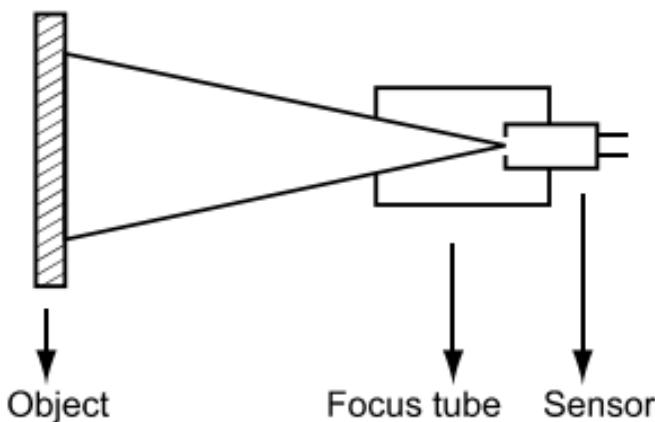
Press the “**°C/F**” key during measurement can select or switch the temperature unit **°C** and **°F** (**°C/F** switches in a cycle ).



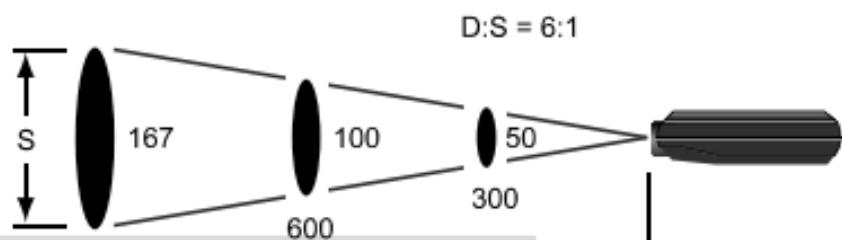
**Warning: Do not point laser directly at eye or indirectly off reflective surfaces.**

### 6 D:S ratio

The thermometer has a visual angle and visual spot size. a drawing is shown as following:



Make sure that the target is larger than the unit's visual spot size. The smaller the target, the closer you should be to it. The relationship between distance and spot size is 6:1, the drawing as following:



## 7 CLEANING INSTRUCTIONS

The meter may be wiped down with a wet sponge or cloth using a Unit: mm Distance (D) : Spot size (S) mild water based detergent or anti-bacterial soap and rinsed under a gentle stream of cold water.

### NOTE:

This unit is not designed for complete submersion or washing in automated dishwashers.



## **8 Replace batteries**

If the sign “” appears on the LCD display, it indicates that battery should be replaced. Remove the battery cover, and replace the exhausted batteries with new ones.