



Infrared Thermometer with Multi Spot Laser **User's Manual**



Please read this user manual thoroughly before using
the unit and keep safe for future reference

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1. Introduction

This multi spot laser infrared thermometer can provide fast, easy and accurate temperature readings. With non-contact (infrared) technology, the thermometer can be used to measure the surface temperature of hard-to-reach objects like electrified equipment or moving objects, without any damage to the object being measured or any injury to the user.

2. Application

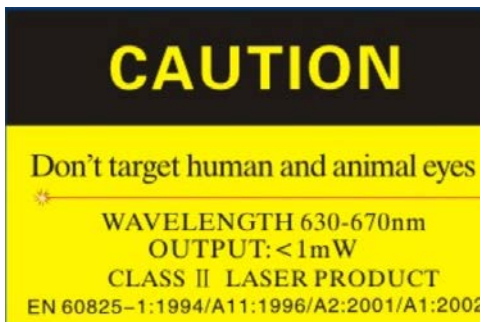
These units are widely used in food preparation, safety and fire inspection, plastic molding, asphalt, marine, printing ink and dryer temperature, diesel and fleet maintenance.

3. Features

- Fast and easy measurement
- Precise non-contact measurement
- Built-in, multi spot laser pointer for increased target accuracy
- Max/Min recording function
- Backlight LCD display
- Emissivity adjustable from 0.1 to 1.0
- Automatic measurement range selection with resolution 0.1°C/F
- Automatic trigger off
- Auto power off

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**

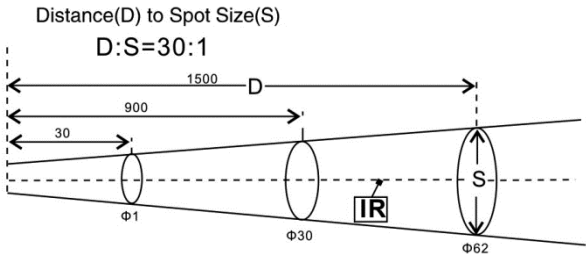
CE EMC compliant

5. Field of View

The meter's field of view or "Distance to Spot" indicates the distance from the target spot. This meter's field of view is 30:1, for example, if the meter is 30 inches from the target spot, the diameter of the target must be at least 1 inch.

Ensure target is larger than the unit's spot size. The smaller the target, the closer the unit should be. Where accuracy is critical, ensure target is at least twice as large as the spot size.

Other distance ratios are show below in the field of view diagram.

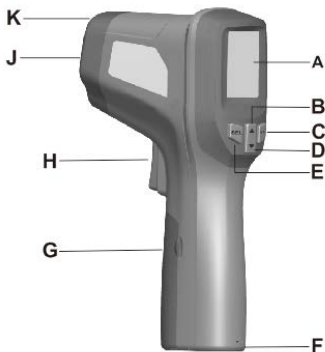


6. Specifications

Temp. range	-30°C to 950°C -22°F to 1742°F
Accuracy	-30°C to 0°C / -4°F to 32°F: $\pm 3^{\circ}\text{C} / 5.4^{\circ}\text{F}$
	Above 0°C /32°F: $\pm 1.5\%$ of reading $\pm 2^{\circ}\text{C} / 3.6^{\circ}\text{F}$
Optical Resolution	D:S=30:1
Response time	< 500ms
Emissivity	adjustable from 0.1~1.0
Resolution	0.1°C (0.1°F)
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°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	9V battery
Weight	176g
Dimensions(L*W*H)	155.5×98.8×27.5mm

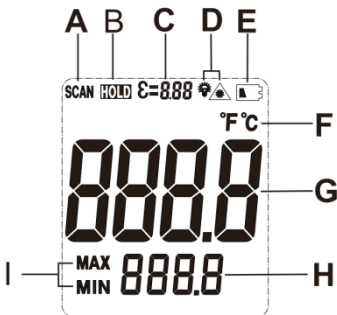
7. Meter Description

- A. LCD Display
- B. UP button
- C. Laser/Backlit button
- D. DOWN button
- E. Select button
- F. Wrist strap hole
- G. Battery cover
- H. Measurement trigger
- J. IR sensor
- K. Laser pointer



8. LCD Display Description

- A. Measurement icon
- B. Data hold icon
- C. Emissivity icon
- D. Backlit/laser icon
- E. Low battery indication
- F. °C /°F icon
- G. Current temperature value
- H. Max/Min record value
- I. Max/Min icon



9. Operating Instruction

9.1 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 held for several seconds.
- ⑤ The meter will automatically shut off after 20 seconds.


Measurement Note:

If the meter is to be used where the ambient temperature has changed dramatically, wait at least 30 minutes for the unit to adjust to the new temperature.



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

9.2 Button Function





① °C / °F button:

In Measurement Mode, press button " to switch the temperature unit from °C to °F


② Laser pointer/Backlight button:

- In Measurement Mode, press button " to turn backlight on or off.
- In "HOLD" Mode, press button " to turn laser pointer on or off.

④ SELECT Button

- Press button " to review MAX and MIN value.
- Keep pressing button " until "ε" icon flashes on the screen, the unit is now in Emissivity Mode. Press button " to adjust emissivity value, then keep pressing button " return to measurement mode.

9.3 Battery Replacement

When the low battery icon " appears, replace the meter's battery. Open the battery compartment cover and replace the 9V. Close cover.

10. Notes

10.1 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. This is translated into the temperature reading by electronics and is displayed on the LCD screen.

The laser is used for target aiming only.

10.2 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.

10.3 Distance & Spot Size

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

10.4 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.

10.5 Notice

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

Do not take measurements through transparent surfaces such as glass.

Ensure surface under test is clear of frost, oil, grime, etc., before taking measurement.

10.6 Maintenance

This meter contains no user serviceable parts, repairs should be carried out by qualified personnel only.

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

Do not immerse it in water.

Do not store it in high temperature or humidity.

11. Accessories

User's manual

9V Battery

Carry case



S.Brannan & Sons

Cleator Moor, Cumbria, UK. CA25 5QE

www.brannan.co.uk



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