IR-829 Infrared Thermometer
User Manual

Contents

1. Introduction

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

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

2. Features

● Fast and easy measurement

● Precise, non-contact measurement

● Built-in laser pointer increases the target accuracy

● Max/Min Record

● Backlight LCD display

● Emissivity adjustable from 0.1～1.0

● Automatic measurement range selection with resolution 0.1℃/°F

● 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.

CAUTION

Don't target human and animal eyes

WAVELENGTH 630-670nm
OUTPUT: <1mW
CLASS II LASER PRODUCT
EN 60825−1:1994/A11:1996/A2:2001/A1:2002
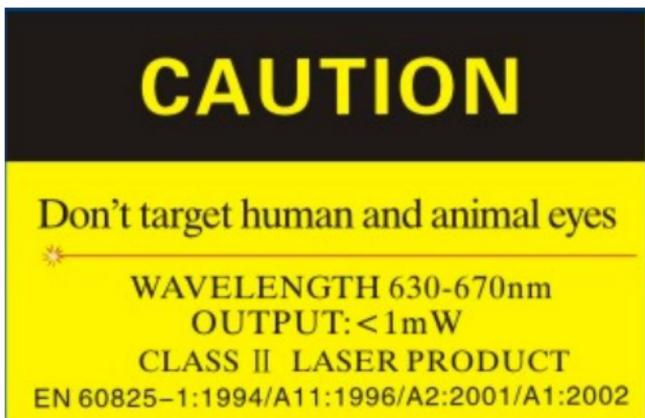
● **Safety Symbol**

$C\epsilon$ Comply with EMC

5. Field of View

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

Distance(D) to Spot Size(S)
D:S=30:1
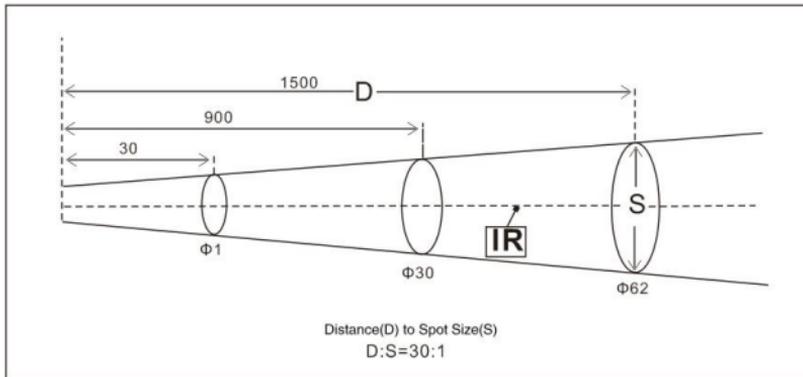
6. Specifications

Temp. range	-30℃～950℃
	-22°F～1742°F
Accuracy	-30℃～0℃ /-22℉～32℉：±3℃ /5.4°F
	Above 0℃ /32°F：±1.5% of reading±2℃ /3.6°F
Optical Resolution	D:S=30:1
Response time	＜500ms
Emissivity	adjustable from 0.1～1.0
Resolution	0.1℃ (0.1°F)
Spectral Response	8～14um
Polarity Display	Auto display, "-" indicates negative, positive has no sign.
Diode Laser	Output＜1mW，630～670nm,class 2(II)
Auto Power Off	Auto shuts off after 20 seconds of no activity
Operating Temp.	0℃ to 50℃ / 32°F to 122°F
Storage Temp.	-20℃ to 60℃ / -4°F to 140°F
Relative Humidity	Operating:**10～95%**RH,Storage:<**80%**RH
Power Supply	9V battery
Weight	176g
Dimensions(L*W*H)	156×99×28mm

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
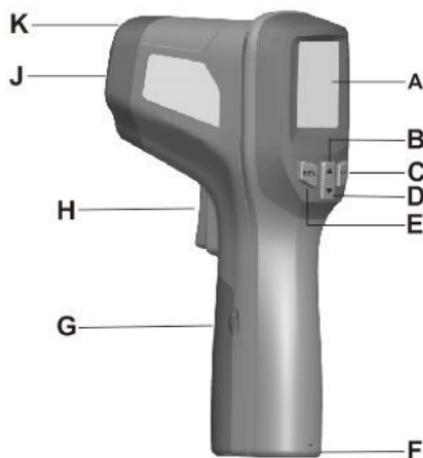
8. LCD Display Description

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
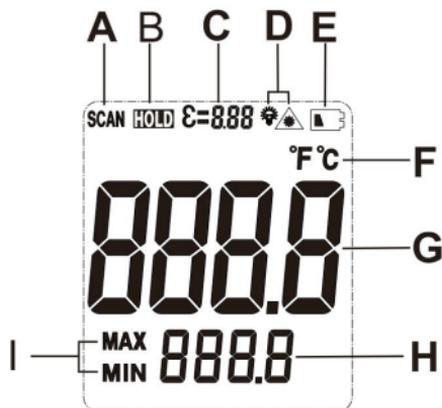
9. Operating Instruction

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 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.

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

9.2 Button Function

1. °**C/°F button:** In Measurement Mode, press button" ▲▼ "to switch the temperature unit °C or °F.

2. **Laser pointer/Backlight button:** In Measurement Mode, press

[icon] to turn the backlight on/off.

In "HOLD" Mode press [icon] to turn the laser pointer on/off.

9.3 SEL Button

● Pull the trigger to turn the meter on and press [SEL] to review MAX or MIN value.

● Pull the trigger to turn the meter on, keep pressing [SEL] until ε icon flashes on the screen, then let go of [SEL], press [▲▼] to adjust emissivity value, then keep pressing [SEL] to return to the normal measurement mode.

9.3 Battery Replacement

1. When the low battery icon "[icon]" appears, replace the battery.
2. Open the battery compartment, replace the 9V battery and close the battery compartment cover.

10. Notes

10.1 Work Principle

- This infrared thermometer is designed for measuring surface temperatures of an object.

- The laser is used for aiming at the target object only.

10.2 Field of View

- The object under test should be larger than the spot size calculated by the field of view diagram (on page 4)

- 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 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.

10.6 Maintenance

- Do not use volatile liquids to clean the unit, wipe it with a dry soft cloth.
- Do not disassemble the unit.
- Do not immerse it in water.
- Do not store it in high temperature or humidity.

11. Accessories

① User's manual

② 9V Battery

③ carry case

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