

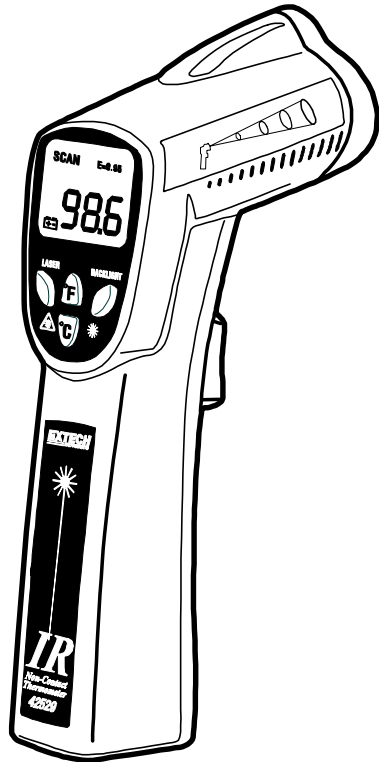
User's Manual

**EXTECH**<sup>®</sup>  
**INSTRUMENTS**

A FLIR COMPANY

**InfraRed Thermometer  
with Laser Pointer**

**MODEL 42529**



CE

### ***Introduction***

---

Congratulations on your purchase of the Model 42529 IR Thermometer. This thermometer makes non-contact (infrared) temperature measurements at the touch of a button. The built-in laser pointer increases target accuracy while the backlit LCD and handy push-buttons combine for convenient, ergonomic operation. Proper use and care of this meter will provide years of reliable service.

## Safety

- Use extreme caution when the laser pointer beam is on
- Do not point the beam toward anyone's eye or allow the beam to strike the eye from a reflective surface
- Do not use the laser near explosive gases or in other potentially explosive areas



## Specifications

### Infrared Thermometer Specifications

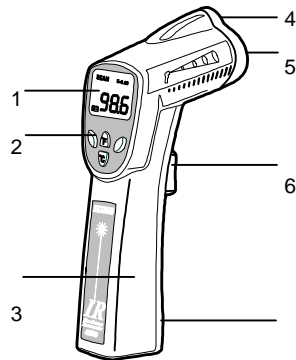
Range / Resolution	-20 to 320°C (0 to 600°F)	1°C/F
Accuracy	± 2% of reading or ± 2°C (4°F) whichever is greater. Note: Accuracy is specified for the following ambient temperature range: 18 to 28°C (64 to 82°F)	
Emissivity	0.95 fixed value	
Field of View	D/S = Approx. 6:1 ratio (D = distance, S = spot)	
Laser power	Less than 1mW	
Spectral response	6 to 14 μm (wavelength)	

### General Specifications

Display	3½ digit backlit LCD display with function indicators
Display rate	1 second approx.
Over range indication	Audible tone sounds and 'OVER' appears on the LCD when the measurement exceeds the measurement range spec.
Operating Temperature	0°C to 50°C (32°F to 122°F)
Operating Humidity	Max. 80% RH.
Power Supply	9V battery
Automatic Power Off	Meter shuts off automatically after 7 seconds
Weight	180g / 6.35 oz.
Size	211 x 89 x 38mm (8.3 x 3.5 x 1.5")

### Meter Description

1. LCD Display
2. Function Buttons
3. Handle Grip
4. Laser Pointer
5. IR Sensor
6. Measurement Trigger
7. Battery Compartment



## Operating Instructions

---

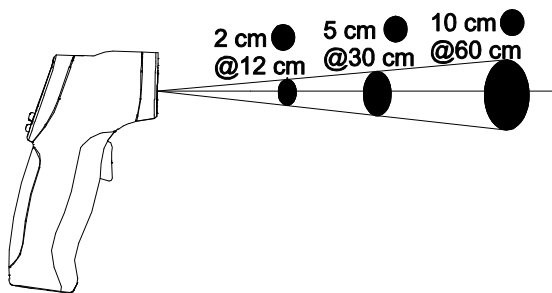
1. Hold the meter by its **Handle Grip** and point it toward the device whose temperature is to be measured.
2. Press and hold the red **Trigger** to turn the meter on and begin testing. The display will light if the battery is charged. Replace the battery if the display does not light.
3. While continuing to press the Trigger, push the red **Laser** button to turn on the laser pointer. Aim the red beam approximately a half inch higher than the point of test as shown in the diagram below (pressing the Laser button again turns the laser off).
4. While measuring, the SCAN display icon will appear on the LCD above the temperature measurement and to the left of the emissivity value (fixed at 0.95.).
5. If the measurement exceeds the useable temperature range (0 to 600°F), the meter will emit a tone and the LCD will display 'OVER'.
6. Release the Trigger when the temperature stabilizes. The HOLD display icon will appear on the LCD indicating that the reading is being held.
7. Set the temperature units (°C or °F) using the blue **°C** and **°F** buttons.
8. Press the yellow **Backlight** key to turn on the LCD backlighting function.
9. The meter will automatically power down after 7 seconds.

## Field of View

---

The meter's field of view is 6:1. For example, if the meter is 30.4cm from the target (spot), the diameter of the target must be at least 5.08cm. Other distances are shown below in the field of view diagram.

Note that measurements should normally be made less than 60.9cm from the target. The meter can measure from further distances but the measurement may be affected by external sources of light. In addition, the spot size may be so large that it encompasses surface areas not intended to be measured.




## Measurement Notes

---

1. The object under test should be larger than the spot (target) size calculated by the field of view diagram (see diagram on previous page or on side of the meter).
2. If the surface of the object under test is covered with frost, oil, grime, etc., clean before taking measurements.
3. If an object's surface is highly reflective apply masking tape or flat black paint before measuring.
4. The meter cannot measure through transparent surfaces such as glass.
5. Steam, dust, smoke, etc. can obscure accurate measurements.
6. The meter compensates for deviations in ambient temperature. It can, however, take up to 30 minutes for the meter to adjust to extremely wide ambient temperature changes.
7. To find a hot spot, aim the meter outside the area of interest then scan across (in an up and down motion) until the hot spot is located.

## Battery Replacement

---

When the low battery symbol  appears on the LCD, replace the meter's 9V battery. The battery compartment is located on the bottom of the meter's handle. Open the compartment by sliding the battery compartment cover off in the direction of the arrow. Replace battery and re-install the battery compartment cover.



You, as the end user, are legally bound (**Battery ordinance**) to return all used batteries and accumulators; **disposal in the household garbage is prohibited!**

You can hand over your used batteries / accumulators at collection points in your community or wherever batteries / accumulators are sold!

**Disposal:** Follow the valid legal stipulations in respect of the disposal of the device at the end of its lifecycle

**Copyright © 2005 Extech Instruments Corporation**

All rights reserved including the right of reproduction in whole or in part in any form.