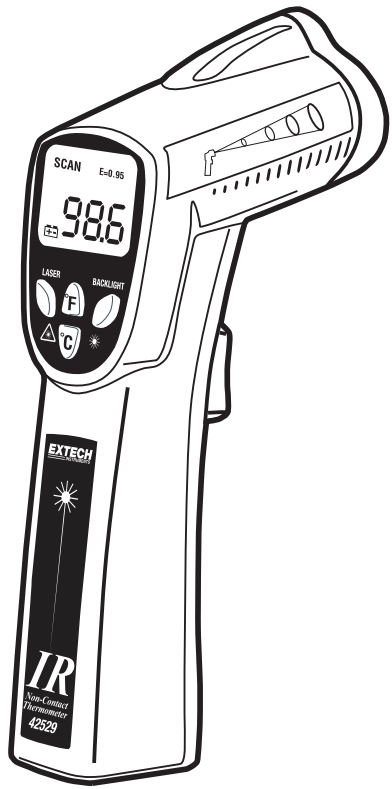
User's Manual

EXTECH INSTRUMENTS

InfraRed Thermometer
with Laser Pointer

MODEL 42529



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.

One Year Limited Warranty

EXTECH INSTRUMENTS CORPORATION warrants this instrument to be free of defects in parts and workmanship for one year from date of shipment (a six month limited warranty applies on sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department at (781) 890-7440 ext. 210 for authorization or visit our website at www.extech.com (click on 'Contact Extech' and go to 'Service Department' to request an RA number). A Return Authorization (RA) number must be issued before any product is returned to Extech. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. Extech specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Extech's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

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

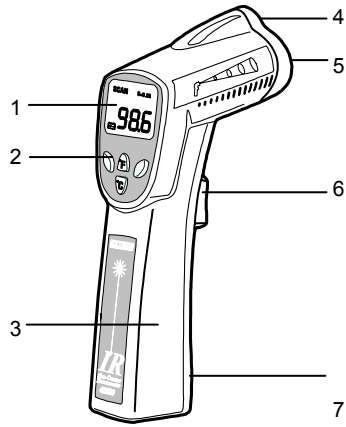
Range / Resolution	0 to 600°F (-20 to 320°C)	1°C/F
Accuracy	± 2% of reading or ± 4°F (2°C) whichever is greater. Note: Accuracy is specified for the following ambient temperature range: 64 to 82°F (18 to 28°C)	
Emissivity	0.95 fixed value	
Field of View	D/S = Approx. 6:1 ratio (D = distance, S = spot)	
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	32°F to 122°F (0°C to 50°C)
Operating Humidity	Max. 80% RH.
Power Supply	9V battery
Automatic Power Off	Meter shuts off automatically after 7 seconds
Weight	6.35 oz. / 180g
Size	8.3 x 3.5 x 1.5" (211 x 89 x 38mm)

Meter Description

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

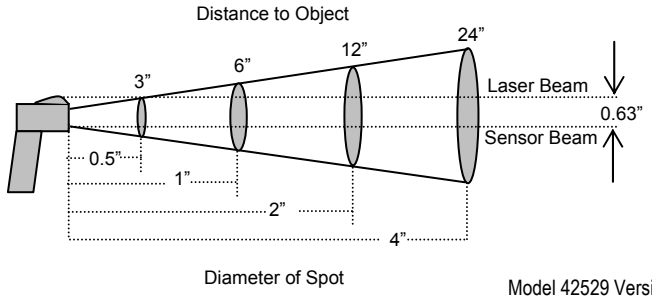


Operating Instructions

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, meaning that if the meter is 6 inches from the target, the diameter of the object under test must be at least 1 inch. Other distances are shown below in the field of view diagram. Refer to the chart printed on the meter for more information.



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.

Calibration and Repair Services

Extech offers complete repair and calibration services for all of the products we sell. For periodic calibration, NIST certification or repair of any Extech product, call customer service for details on services available. Extech recommends that calibration be performed on an annual basis to ensure calibration integrity.