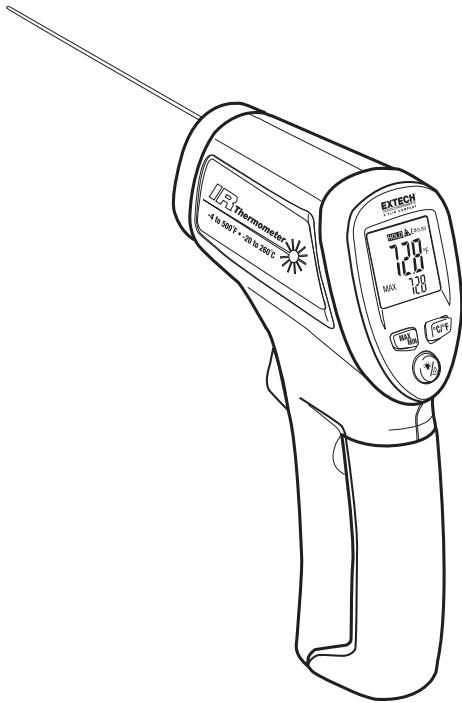


User Guide

EXTECH[®]
INSTRUMENTS
A FLIR COMPANY

InfraRed (IR) Thermometer

MODEL IR250



Introduction

Congratulations on your purchase of the Model IR250 Thermometer. This IR thermometer measures and displays non-contact (infrared) surface temperature to a maximum of 500°F (260°C). The built-in laser pointer increases target accuracy and the backlit LCD allows for use in dimly lighted areas.

Warranty

EXTECH INSTRUMENTS CORPORATION (a FLIR company) 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

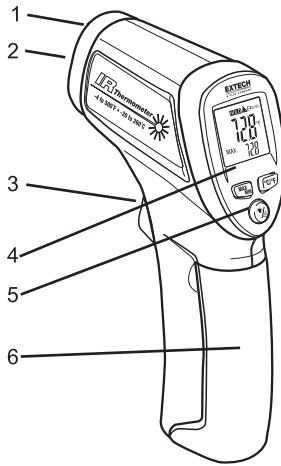
- Use extreme caution when the laser pointer is on
- Do not point the beam toward anyone's eye or allow the beam to strike the eye from a reflective surface
- Do not use the laser near explosive gases or in other potentially explosive areas





Descriptions

Meter Description

1. Laser pointer
2. IR sensor
3. Measurement trigger
4. LCD display
5. Function buttons*
6. Battery compartment

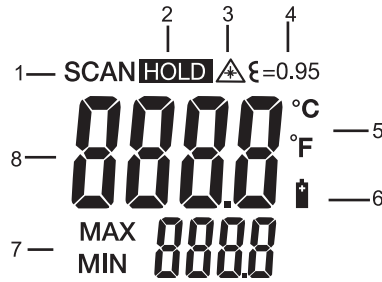


Function Buttons

- **Max/Min:** Select Max or Minimum display.
- **°C/°F:** Select temperature units
-   **Backlight / Laser Pointer:** For turning the LCD backlight or the Laser pointer ON/OFF

Display Description

1. Displays SCAN when trigger is depressed;
2. Displays HOLD when trigger is released
3. Laser pointer ON
4. Emmisivity setting (0.95)
5. Temperature units
6. Low battery
7. Max/Min display
8. Temperature display



Operating Instructions

Power

1. The meter is powered by one (1) 9V battery.

IR Measurements



1. Hold the meter by its handle and point it toward the surface to be measured.
2. Pull and hold the trigger to turn the meter on and begin testing. The temperature reading, the flashing 'SCAN' icon, the emissivity, the unit of measure and other icons as shown in the Display Description will appear. Note: Replace the meter's 9V battery if the display does not switch on.
3. Release the Trigger and the reading will hold for approximately 8 seconds (HOLD will appear on the LCD) after which the meter will automatically shut off.

Temperature units

With the trigger pressed, press the °F/°C button to select the temperature units.

Backlight/Laser Pointer


With the trigger pressed:

1. Press the  button once to change the state of the backlight (On or Off). When the laser is on the laser icon will appear in the display.
2. Press the  button again to change the state of the backlight (On or Off).

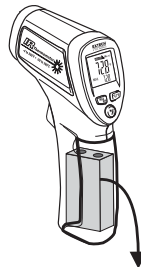
IR Measurement Notes

1. The object under test should be larger than the spot (target) size calculated by the field of view diagram (printed on the side of the meter and in this guide).
2. Before measuring, be sure to clean surfaces that are covered with frost, oil, grime, etc.
3. If an object's surface is highly reflective, apply masking tape or flat black paint to the surface before measuring. Allow time for the paint or tape to adjust to the temperature of the surface it is covering.
4. Measurements through transparent surfaces such as glass may not be accurate.
5. Steam, dust, smoke, etc. can obscure measurements.
6. The meter automatically compensates for deviations in ambient temperature. However, it can take up to 30 minutes for the meter to adjust to extremely wide 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

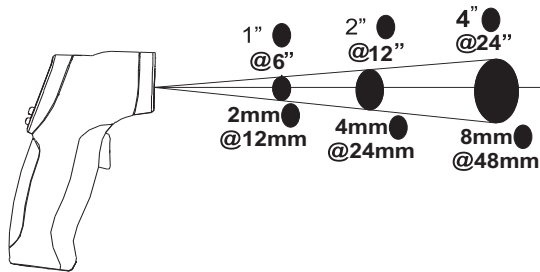
When the low battery symbol  appears on the LCD, replace the meter's battery (9V). The battery compartment is located in the rear of the handle.

Open the compartment by carefully pulling the panel down. The panel is hinged at the bottom and does not completely disconnect from the meter. Replace the 9V battery and close the battery compartment cover.



Field of View

As the distance from the object increases, the spot size of the area measured becomes larger. The meter's field of view is 6:1; in other words if the meter is 6 inches from the target (spot), the diameter of the target must be at least 1 inch. Note that measurements should normally be made as close as possible to the device under test. The meter can measure from moderate 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.



Specifications

Range	-4 to 500°F (-20 to 260°C)
Resolution	0.1°
Accuracy	-4 to 20°F (-20°C to -7°C): ±7.5°F (4°C) 20 to 500°F (-7°C to 260°C): ±3% of reading or ±5°F/2.5°C (whichever is greater) Note: Accuracy is specified for an ambient temperature range of 64 to 82°F (18 to 28°C)
Emissivity	Fixed 0.95
Field of View	D/S = Approx. 6:1 ratio (D = distance; S = spot or target)
Laser pointer	Class 2(II) laser < 1mW power; Wavelength is 630 to 670nm
IR Spectral response	8 to 14 μm
Display	Backlit LCD display with function indicators
Display update rate	Less than 1 second
Operating Temperature	32°F to 122°F (0°C to 50°C)
Operating Humidity	80% Relative Humidity max.
Power Supply	9V battery
Automatic Power Off	Meter shuts off automatically after 8 seconds
Weight	6.3 oz (180g)
Dimensions	3.2 x 1.6 x 6.3" (82x41x160mm)

Calibration and Repair Services

Extech offers repair and calibration services for the products we sell. Extech also provides NIST certification for most products. Call the Customer Care Department for information on calibration services available for this product. Extech recommends that annual calibrations be performed to verify meter performance and accuracy.



Support line (781) 890-7440

Technical Support: Extension 200; E-mail: support@extech.com

Repair & Returns: Extension 210; E-mail: repair@extech.com

Product specifications subject to change without notice

For the latest version of this User Guide, Software updates, and other up-to-the-minute product information, visit our website: www.extech.com
www.extech.com

Extech Instruments Corporation, 285 Bear Hill Road, Waltham, MA 02451

Copyright © 2009 Extech Instruments Corporation (a FLIR company)

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