

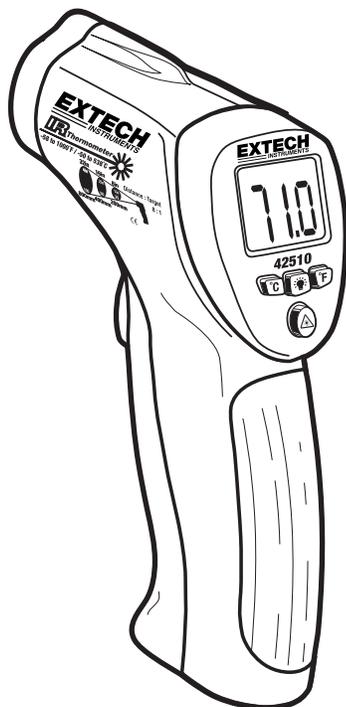
User's Manual

EXTECH[®]
INSTRUMENTS

A FLIR COMPANY

**Wide Range Mini InfraRed Thermometer
with Laser Pointer**

MODEL 42510



CE

Introduction

Congratulations on your purchase of the Model 42510 IR Thermometer. This thermometer measures and displays non-contact (infrared) temperature readings 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

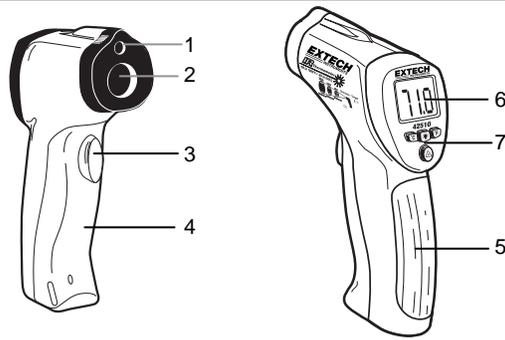
Range / Resolution	-50 to 200°C (-58 to 200°F) 200°C to 538°C (200°F to 1000°F)	0.1° 1°
Accuracy	± 1% of reading or ±1°C (1.8°F) whichever is greater, from 15 to 50°C (60 to 113°F) ± 2% of reading or ±2°C (4°F) whichever is greater, for remainder of range: -50 to 537°C (-58 to 1000°F) Note: Accuracy 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. 8:1 ratio (D = distance; S = spot)	
Laser power	Less than 1mW	
Spectral response	6 to 14 μm (wavelength)	

General Specifications

Display	Backlit LCD display with function indicators
Display update rate	1 second approx.
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 6 seconds
Weight	180g / 6.4 oz.
Dimensions	82 x 42 x 160mm (3.2 x 1.6 x 6.3")

Meter Description

1. Laser pointer beam
2. IR Sensor
3. Measurement trigger
4. Battery compartment cover
5. Handle grip
6. LCD Display
7. Function Buttons



Operating Instructions

1. Hold the meter by its Handle Grip and point it toward the surface to be measured.
2. Pull and hold the orange Trigger to turn the meter on and begin testing. The temperature reading, the 'SCAN' icon, the emissivity icon (E=0.95), and the unit of measure will appear. Note: Replace the battery if the display does not light.
3. While continuing to pull the Trigger:
 - a. Push the laser button  to turn on the laser pointer. When the laser is ON the laser icon  will appear on the LCD over the temperature reading. Aim the red beam approximately a half inch above the point of test (pressing the laser button again turns the laser off).
 - b. Select the temperature units using the °C or °F button.
 - c. Push the backlight button  to turn on the LCD backlighting function.
4. Release the Trigger and the reading will hold for approximately 6 seconds (HOLD will appear on the LCD) and then the meter will automatically shut off.

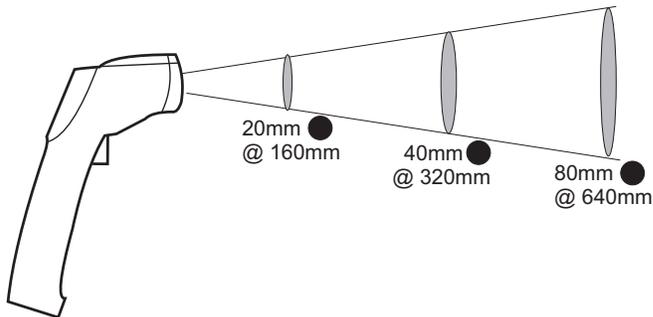
Over-range Indicator

If the temperature measurement exceeds 1000°F (538°C), the thermometer will display dashes in place of a temperature reading.

Field of View

The meter's field of view is 8:1. For example, if the meter is 16 inches from the target (spot), the diameter of the target must be at least 2 inches. Other distance ratios are shown below in the field of view diagram.

Note that measurements should normally be made less than 2 feet 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.
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 to the surface before measuring.
4. The meter may not make accurate measurements through transparent surfaces such as glass.
5. Steam, dust, smoke, etc. can obscure 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 lower left side of the display, replace the meter's battery (9V). The battery compartment is located behind the light green panel that surrounds the meter's trigger (see diagram). Open the compartment by pulling the light green panel down from the trigger area. Replace the 9V battery and close 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

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