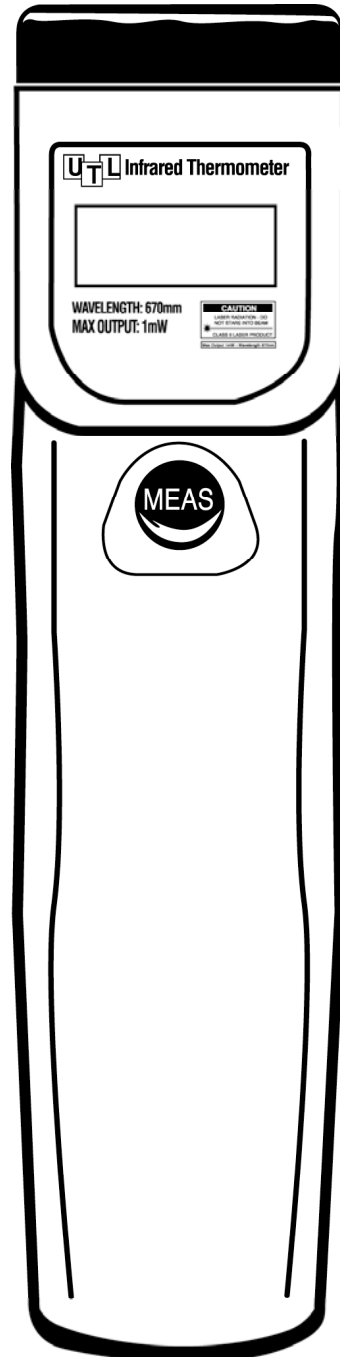


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INSTRUCTION MANUAL

UTLIT1

Infrared Thermometer



Introduction

The UTLIT1 infrared thermometer makes it easy to check the temperature of vents, various rooms, motor bearings, power panels and fuses, and an amazing variety of other applications. It includes laser sighting to help identify your temperature target.

Features include

- 5 to 1 spot ratio
- -4 to 600°F
- Precision laser targeting
- Easy one handed operation
- 4 second auto-hold

Safety Notes

Before using this infrared thermometer, read all safety information carefully. In this manual the word "**WARNING**" is used to indicate conditions or actions that may pose physical hazards to the user. The word "**CAUTION**" is used to indicate conditions or actions that may damage this instrument.

NOTE: The UTLIT1 is not recommended for use on shiny surfaces such as chrome, mirrors or polished metals.



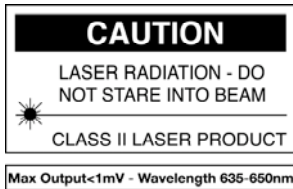
WARNING!

To avoid thermal shock, the instrument should be stored at room temperature between 32° to 122°F (0° to +50°C).



WARNING!

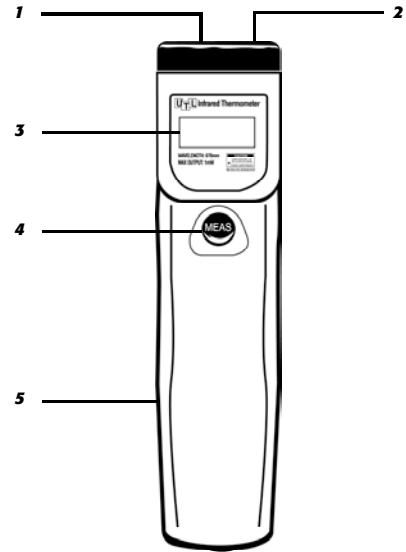
DO NOT look directly into the laser beam. Permanent eye damage may result.



International Symbols

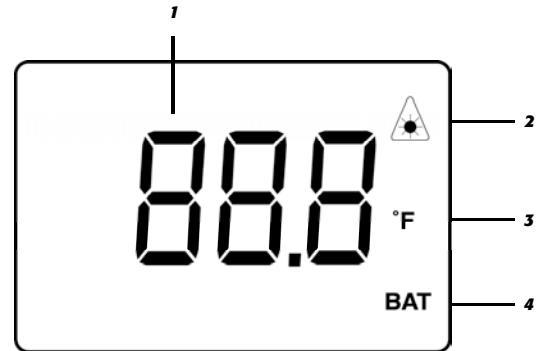
	Dangerous Voltage		Ground
	AC Alternating Current		Warning or Caution
	DC Direct Current		Double Insulation (Protection Class II)
	Either AC or DC		Fuse
	Not Applicable to Identified Model		Battery

Controls and Indicators



1. **IR Sensor**
2. **Laser Pointer Beam**
3. **LCD Display:** Temperature
4. **Trigger:** Initiates measurements.
5. **Battery Compartment**

Displays and Indicators



1. **LCD Display:** Digital readout.
2. : Laser on annunciator.
3. **°F:** Fahrenheit.
4. **BAT:** Battery indicator.

Operating Instructions

Power ON/OFF

The meter automatically powers up when the "MEAS" button is pressed. Press the "MEAS" button to take a reading. Read the measured temperature on the LCD. The meter powers OFF automatically approximately 4 seconds after the "MEAS" button is released.

Taking Measurements

To take a temperature measurement using your UTLIT1, you simply point the aperture at an object and push the "MEAS" button. The object's temperature will show up on the display.

There will be a delay of approximately one-second between the time you initially push the "MEAS" button and the time the display comes on.

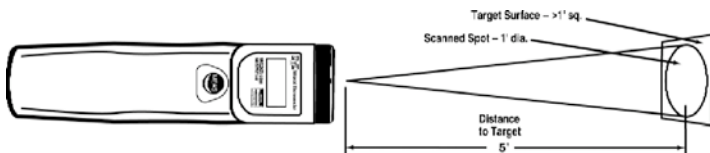
NOTE: This thermometer will automatically shut off if left idle for more than 4 seconds.

Follow these general guidelines to ensure you get the most accurate readings possible:

- Be sure the measured object fills the "spot" seen by the aperture. The distance to spot ratio for the UTLIT1 is 5:1.
- Not recommended for measuring shiny or reflective surfaces. Place the meter as close as possible when measuring small objects.
- The meter is pre-set to measure objects with an emissivity of 0.95. This will accommodate the majority of items measured without compensating for higher or lower value. In most cases there will be little difference in measurements even if an object's emissivity is higher or lower than this pre-set value. Compare and confirm with known values if in doubt.

This shows the one-foot spot fitting within the one-foot target area. At this distance, and anything closer, the target's temperature will be accurately measured (Fig 1).

NOTE: If the two-foot diameter spot includes unwanted objects in the background that are not part of the one-foot target, the temperature of the background objects will be figured in with the target's temperature and cause errors in your measurements.



(Fig 1)

Data Hold

This meter automatically holds the last temperature reading on the LDC for 4-5 seconds after the MEAS key is released.

No extra key presses are necessary to freeze the displayed reading.

Measurement Considerations

Holding the meter by its handle, point the IR Sensor toward the object whose temperature is to be measured. The meter automatically compensates for temperature deviations from ambient temperature. Keep in mind that it will take up to 30 minutes to adjust to wide ambient temperature changes. When low temperatures are to be measured followed by high temperature measurements, some time (several minutes) is required after the low (and before the high) temperature measurements are made. This is a result of the cooling process which must take place for the IR sensor.

LCD Error Messages

The thermometer incorporates visual diagnostic messages as follows:

E4 : "E4" Need re-calibrate, please return to the store or authorized lab.

E6 : "E6" Part damaged, return the unit to the store you purchased for repairing.

Maintenance

Periodic Service



WARNING!

Repair and service of this instrument is to be performed by qualified personnel only.

Cleaning

Periodically clean your instrument's case using a damp cloth. **DO NOT** use abrasive, flammable liquids, cleaning solvents, or strong detergents as they may damage the finish, impair safety, or affect the reliability of the structural components.

Battery Replacement

Always use a fresh replacement battery of the specified size and type. Immediately remove the old or weak battery from the meter and dispose of it in accordance with your local disposal regulations. Old or defective batteries can leak chemicals that corrode electronic circuits.

A flashing display is the indication that the battery voltage has fallen into the critical region (6.5 to 7.5 V). Reliable readings can be obtained for several hours after the first appearance of the low battery indication.

Open the battery compartment and remove the battery, then install a new battery and replace the cover.



WARNING!

Under **NO** circumstance should you expose batteries to extreme heat or fire as they may explode and cause injury.

Lens Care

The sensor lens is the most delicate part of the thermometer. The lens should be kept clean at all times. Care should be taken when cleaning the lens using only a soft cloth or cotton swab with water or medical alcohol. Allowing the lens to fully dry before using the thermometer. Do not submerge any part of the thermometer in liquids.

Specifications

Display	LCD display
Measurement ranges	-4° to 600°F
Sample rate	1 sec. approx.
Power off	Automatic shut off after 4 seconds
Operating temperature	32° to 122°F (0° to 50°C)
Operating humidity	Max. 80% RH
Power supply	9V battery
Power current	Approx. 12 mA DC
Weight	150g approx.
Dimensions	170 x 33 x 40 mm
Resolution	1°F/C
Accuracy	±3% of reading or 2°F whichever is greater (-4° ~ 212°C), others ±4% or 3°F. Notes: 1. Accuracy specified is for ambient temp. 2. Accuracy specified is for emissivity of 0.95.
Emissivity	0.95 fixed
Distance factor	D : S = approx. 5:1 (D = distance, S = spot)

CE Certification

The meter conforms to the following standards:

EN 50081-1/1992 : EN 55022

EN 50082-1/1997 : EN 55024

(EN 61000-4-2/-3/-8, ENV 50204)

The meter complies with the essential protection requirements of Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

UTL UTLIT1

Infrared Thermometer

Limited Warranty

The UTLIT1 is warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase. If within the warranty period your instrument should become inoperative from such defects, the unit will be repaired or replaced at UEi's option. This warranty covers normal use and does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect or improper maintenance. Batteries and consequential damage resulting from failed batteries are not covered by warranty.