

**EMISSIONITY**

The IR1000 is set to an emissivity of 0.95. This applies to most applications and will provide a reliable accurate measure of the surface temperature.

Shiny bright surfaces (i.e. chrome, new copper, white boards) have a much lower emissivity, and will not read accurately. A common solution to measuring on these types of surfaces is to first apply a small piece of masking tape. The tape has an emissivity much closer to 0.95, and will quickly take on the temperature of the surface to which it is applied.

**BATTERY REPLACEMENT**

1. **Open** the battery compartment by pulling the compartment lid at the indentations, away from the trigger (see *Thermometer Attributes* section).
2. **Remove** and recycle exhausted batteries.
3. **Replace** 2 x AAA alkaline batteries observing the polarity indicated on the inside markings.
4. **Return** compartment lid and make sure it locks into place.

**ACCURACY**

Ambient Temperature	Target Temperature	Accuracy
77°F	59~95°F(15~35°C)	±1.8°F(1.0°C)
68~79°F (20~26°C)	32~1000°F (0~538°C)	±2% of reading or 4°F(2°C) whichever is greater
68~79°F (20~26°C)	-58~32°F (-50~0°C)	±(4°F+0.1 degree/degree) ±(2°C+0.05 degree/degree)

**WARRANTY**

This product is warranted to be free from defects in materials and workmanship for a period of two years from the date of purchase. During this warranty period, Klein Tools has the option to repair or replace or refund the purchase price of any unit which fails to conform to this warranty under normal use and service. This warranty does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect, or improper maintenance. Batteries and damage resulting from failed batteries are not covered by warranty. A purchase receipt or other proof of original purchase date will be required before warranty repairs will be rendered.

Any implied warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the express warranty. Klein Tools shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss.

Some states or countries laws vary, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. If your Klein product requires repair or for information on how to exercise your rights under the terms of this warranty, please contact Klein Tools at 1-877-775-5346.

**CLEANING**

Clean the instrument by using a damp cloth. Do not use abrasive cleaners or solvents.

Take care to keep the sensor lens clean at all times. Clean the lens using a soft cloth or cotton swab with water or rubbing alcohol only, and allow the lens to dry before use.

**STORAGE**

Remove the batteries when instrument is not in use for a prolonged period of time. Do not expose to high temperatures or humidity. After a period of storage in extreme conditions exceeding the limits mentioned in the Specifications section, allow the instrument to return to normal operating conditions before using it.

**DISPOSAL / RECYCLE**



**Caution:** This symbol indicates that equipment and its accessories shall be subject to a separate collection and correct disposal.

**CUSTOMER SERVICE**

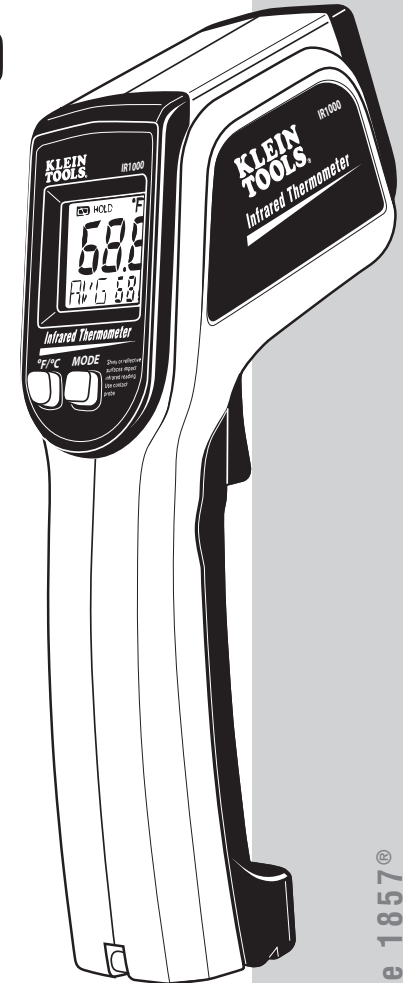
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# Instruction Manual

## IR1000

ENGLISH

- -58° TO 1000°F MEASUREMENT RANGE
- 12:1 SPOT RATIO
- LASER TARGETING
- MAX/MIN/AVG/DIFF
- BACKLIT DISPLAY
- AUTO SHUT OFF
- °F/°C BUTTON



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# IR1000 Instruction Manual

## GENERAL SPECIFICATIONS

The Klein Tools IR1000 is a professional series infrared thermometer. It features a wide measurement range, a tight distance-to-spot ratio, and several calculation modes to assist you in making the best possible measurements.

- **Operating Altitude:** 2000 meters
- **Relative Humidity:** 75% max
- **Operating Temperature:** 32-122°F (0-50°C)
- **Storage Temperature:** -4-140°F (-20-60°C)
- **Accuracy Temperature:** 22.8°C ± 1.7°C (73°F ± 3°F)
- **Emissivity:** 0.95 fixed
- **Optical Resolution (Distance: Spot):** 12:1
- **Dimensions:** 3.25 x 7 x 1.74"
- **Weight:** 3.9 oz.
- **Battery Type:** 2 x AAA alkaline batteries
- **Battery Life:** 14.5 hours
- **Display Resolution:** 0.1°
- **Display Hold:** Auto
- **Calibration:** Accurate for one year
- **Laser:** FDA and IEC Class II
- **Certifications:** CE and RoHS

## ⚠ WARNINGS

To ensure safe operation and service of the tester, follow these instructions. Failure to observe these warnings can result in severe injury or death.

- Do not direct laser beam into eyes, as this can cause permanent eye damage.
- Do not use instrument if the case is damaged in any way.
- Replace the batteries as soon as low battery indicator appears.
- Have the instrument serviced immediately if it is acting abnormally.
- Be cautious of readings of reflective materials as they may be indicated by the instrument as cooler than they actually are (see *Emissivity* section).
- Avoid using the instrument around strong electromagnetic fields.

## SAFE PRACTICES

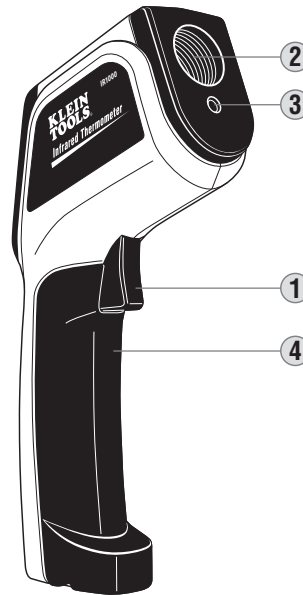
This instrument is designed for professionals who know the hazards associated with their trade. While this instrument offers no foreseeable dangers beyond its laser sight, the equipment you are servicing, as well as the environment you're working in, can be hazardous. These are a few common safety practices for those working around temperature critical environments:

- Follow the manufacturer's maintenance procedures when servicing equipment.
- Before using this instrument to determine if an area is safe to touch or enter, verify your readings are reasonably accurate by comparison with known measurements.
- Properly maintain your infrared thermometer and calibrate it regularly.

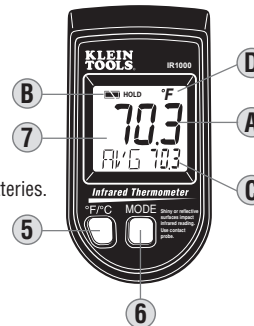
## SYMBOLS

- Laser
- Warning or Caution
- Follow safe disposal procedures
- Dangerous levels
- Battery

## THERMOMETER ATTRIBUTES



1. **Trigger:**  
Initiates measurement.
2. **IR Sensor:**  
Collects temperature data.
3. **Laser Pointer:**  
Assists in aiming the sensor.
4. **Battery Compartment:**  
Pops forward to store 2 x AAA batteries.
5. **°F/°C Button:**  
Changes the measurement scale.
6. **Mode Button:**  
Changes the calculation mode.
7. **LCD Screen:**  
Displays measurement and additional information.



- A. Most recent measurement.
- B. Low battery indicator.  
 Battery OK  
 Battery Low  
 Battery Exhausted
- C. Calculation display.
- D. Temperature scale (°F/°C)

## OPERATING INSTRUCTIONS

### Temperature Measurement

To take measurements with your IR1000, aim the instrument at the object to be measured and pull the trigger. The unit has an auto off after releasing the trigger of 15 seconds.

### Min /Max /Avg /Differential

Press the MODE button to select minimum, maximum, average or differential. Press the trigger and scan the area being measured.

- **Min:** Displays the lowest temperature measured while scanning.
- **Max:** Displays the highest temperature measured while scanning.
- **Avg:** Displays an average of the temperature as you are scanning.
- **Diff:** Displays the difference between the highest and lowest temperatures measured while scanning.

### Selecting Temperature Scale

Press the °F/°C button to alternate between Fahrenheit and Celsius. You can select either scale during or after measurement, when viewing any of the held values.

### Auto Hold

The IR1000 will hold the last temperature measured for 15 seconds after the trigger is released. To recall this value press the MODE key to activate the display to show the held temperature.

## DISTANCE TO SPOT RATIO

The distance-to-spot ratio is a representation of how focused the IR sensor is on the measurement area. The closer you are to the surface you are measuring, the smaller the area of measurement is.

The IR1000 has a 12:1 distance-to-spot ratio. This means that if you are 12 feet away from an air vent, the vent should be 1 foot or less in diameter in order to resolve the most accurate measurement.

Below is an illustration of other example measurements.

