

**IR Thermometer/
LED Light Pen**

800100
Instruction Manual

SPER
SCIENTIFIC

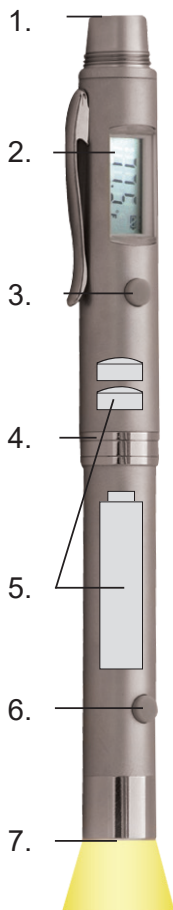
Environmental Measurement Instruments

INTRODUCTION

800100 IR Thermometer/LED Light Pen is unique in two respects: The bright white LED light on one end makes the thermometer ideal for quick field inspections in HVAC, Industrial Hygiene and other applications, while the pen sized case makes it convenient to carry and insures it is always on hand. Since the flashlight has a separate battery, the thermometer will work even when the flashlight battery is dead. The infrared (IR) lens has a protective twist on/off cover.

DESCRIPTION

1. IR Lens (without cover)
2. LCD with backlight
3. IR Button
4. Battery Access
5. Batteries
6. LED Light Button
7. LED Light



OPERATION

1. Press LED Light button (6) to use the LED Light (7). Press the button again to turn the LED Light (7) off.
2. For IR measurement, unscrew the protective cover, point the IR Lens (1) at the target and press the IR button (3). The measurement is displayed on the LCD (2).
3. Measurement is constantly updated as long as the IR button (3) is depressed.
4. When the IR button (3) is released, the last measurement remains on the LCD (2) until the unit turns off (approximately 15 seconds), or until the IR button (3) is pressed again.
5. When the IR measurement is displayed on the LCD, the backlight will turn on and remain active for 10 seconds.

Note: Readings may fluctuate if the pen is moved during measurement. This thermometer is not intended for medical evaluations.

°F/°C: To switch between temperature scales, gently insert the end of a paperclip into the pick hole on the back (opposite the IR button (3)). The LCD (2) displays the selected scale.

OPERATION

1:1 Distance-to-Spot: The target must be larger than the spot size. The farther you are from the object, the larger the spot. For example, if you are 2 feet from the target, the measured area is a 2 foot radius.

Emissivity is the ability of an object to emit or absorb energy. This instrument measures emitted energy using a fixed emissivity value of 0.95 (which covers about 90% of typical applications). When measuring highly reflective surfaces, apply masking tape to the surface or a paint that has a 0.95 emissivity. If the object you are measuring is covered with frost, clear the frost to expose the object's surface before taking the measurement.

BATTERY REPLACEMENT

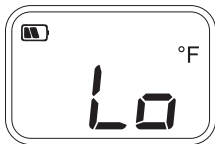
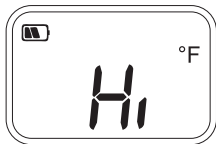
- 1. Thermometer:** When the battery icon flashes on the LCD (2), the thermometer battery is low and should be replaced. Twist off the Battery Access (4) and replace the two 1.5V LR44 batteries (5).
- 2. LED Light:** When the flashlight is dim or fails to operate, the battery should be replaced. Twist off the Battery Access (4) and replace the 1.5V AAA battery (5).

CARE

Keep the protective cover on the IR Lens (1) when not in use. Clean the lens with compressed air, use a soft brush, or carefully wipe the surface with a moist cotton swab. Do not use solvents. The housing may be cleaned with a moist cloth. Protect the instrument from water, physical or electrical shock, dust, and extreme environments.

ERROR CODES

'Hi' or 'Lo' is displayed when the temperature being measured is outside of the range of the instrument, 'Hi' when higher than 428°F (+220°C) and 'Lo' when lower than -27.4°F (-33°C).



'E2' is displayed when the IR thermometer is exposed to the rapid changes in the ambient temperature. 'E3' is displayed when the ambient temperature of the IR thermometer **EXCEEDS** 0° OR + 122°F (+55°C). In both cases you should allow plenty of time (minimum 30 minutes) for the IR thermometer to stabilize to the working/room temperature 32° to 104°F (0° to +40°C).

ERROR CODES



For all other error messages it is necessary to reset the IR thermometer. To reset the IR thermometer, turn the instrument off, remove battery and wait for a minimum of (1) one minute, reinsert the battery and turn on. If the error message remains please contact customer service info@sperscientific.com for further assistance.



SPECIFICATIONS

Range	Resolution	Accuracy
-27 to 482°F (-33 to 250°C)	0.1°F/0.1°C when under 200°C, 1°F/1°C when over 200°C	±2% or 2°C, whichever is greater

Response time: 1 second.

Operating temperature: 32 to 122°F (0 to 50°C)

Storage temperature: -4 to 138°F (-20 to 60°C)

Dimensions: 6" x 1/2" (152 mm x 13 mm)

Weight: 2 oz (57 g)

WARRANTY

Sper Scientific warrants this product against defects in materials and workmanship for period of **five (5) years** from the date of purchase and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted, if available. This warranty does not cover probes, batteries, battery leakage, or damage resulting from accident, tampering, misuse, or abuse of the product. Opening the meter to expose its electronics will void the warranty.

To obtain warranty service, ship the unit postage prepaid to:

SPER SCIENTIFIC LTD.,
8281 E. Evans Rd, Suite #103
Scottsdale, AZ 85260

The defective unit must be accompanied by a description of the problem and your return address. Register your product online at www.sperwarranty.com within 10 days.