IR Pen with True D:S Laser Guide

800109

Instruction Manual

SPER SCIENTIFIC

Environmental Measurement Instruments

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INTRODUCTION

Simply press the button and aim the laser circle guide at the target to scan temperature, release to hold. Results immediately appear in ºC or ºF on the backlit LCD and are automatically held for 27 seconds after the trigger is released. The laser circle corresponds precisely to IR Pen's 6:1 distance to spot ratio. Features Min-Max, hold and auto power off. Rugged and ergonomically designed this infrared thermometer comes complete with one AA battery. The LCD indicates battery status.

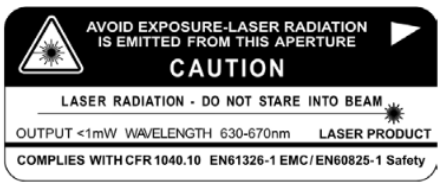
FEATURES

- Small, lightweight design
- LCD display with backlight
- Simple, one-button operation
- Laser Circle indicates precise average of the area measured
- 6:1 Distance to Spot Ratio (D:S)
- Hold function
- Minimum and maximum readings
- Measures up to 932°F (500°C)

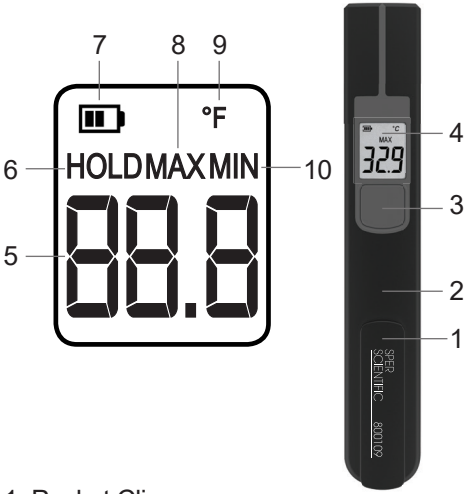
SAFETY SPECIFICATIONS

Conforms to the following standards:

EN 61326-1:2013	Electrostatic Discharge
EN 61326-1:2013	Radiated Immunity (80MHz-2.7GHz)
EN 61326-1:2013	Radiated Disturbance (30 Hz- 1 GHz)
CFR 1040.10 subchapter J	Standard for a class II laser product



FRONT PANEL DESCRIPTION



1. Pocket Clip
2. °F/°C Switch (under battery cover)
3. Measurement Button
4. LCD Display
5. Temperature Reading
6. Hold Indicator
7. Battery Power Indicator
8. Maximum Reading Indicator
9. Temperature Unit (°F/°C)
10. Minimum Reading Indicator

MEASUREMENT PROCEDURES

Note…
When measuring, the target must always be larger than the spot size. The size of the spot will increase with the distance from the object.

To measure a small object, move the pen closer to the surface. To measure a larger object, hold the pen farther away from the surface.

1. Aim the laser end of the pen at the target to be measured.
2. Press and hold down the **MEASUREMENT** button. The temperature reading displays.
3. The reading will continue to update as long as the **MEASUREMENT** button remains depressed.
4. To freeze the current temperature reading, release the **MEASUREMENT** button. "HOLD" and the temperature reading display on the LCD, followed by the maximum and minimum readings.

5. Press and hold down the **MEASUREMENT** button to resume measurement.
6. The pen will shut off automatically if the button is not pressed for approximately 27 seconds.

°C/°F Measurement Unit Conversion

Take off the battery cover and use a pen to shift the scale switch.

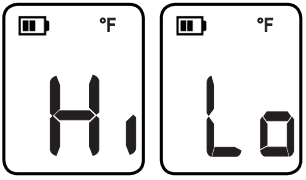
Emissivity

"Emissivity" refers to 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 approximately 90% of typical applications.)

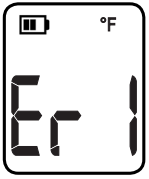
- When measuring highly reflective surfaces, apply electrical tape or a paint with 0.95 emissivity to the surface.
- When measuring an object covered with frost, clear the frost to expose the object's surface before taking the measurement.

LCD ERROR MESSAGES

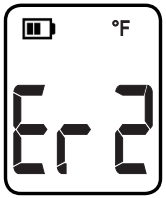
This IR Pen incorporates visual diagnostic messages as follows:



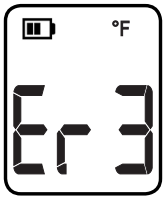
“Hi” or “Lo” is displayed when the temperature being measured is outside the range of the instrument. “Hi” when higher than +500°C (932°F) and “Lo” when lower than -33°C (-27°F)



Er1 is displayed when the ambient temperature of the IR Pen exceeds -10°C (14°F) or +50°C (122°F). In both cases you should allow plenty of time (minimum 30 minutes) for the IR Pen to stabilize to the working/room temperature 0 to +40°C (32 to 104°F)



Er2 is displayed when the IR Pen is exposed to rapid changes in the ambient temperature.



For all other error messages it is necessary to reset the IR Pen. To reset the IR Pen, turn the instrument off, remove battery and wait for a minimum of one minute, reinsert the battery and turn on the unit.

BATTERY REPLACEMENT

The thermometer uses one AA battery. To replace the battery:

1. Slide the battery compartment cover straight back from the meter until it comes off.
2. Remove the old battery.
3. Insert one AA battery, taking care to ensure correct polarity.
4. Replace the battery cover by sliding it back onto the pen until it clicks into place.

STORAGE & CLEANING

Always keep the reflecting mirrors and lens clean. If mirror and lens appear dirty, use a damp cotton swab to wipe clean. Make sure lens on the IR Pen is completely dry before using. The Thermometer is not waterproof – do NOT submerge in water.

SPECIFICATIONS

	Range	Resolution	Accuracy
Temperature	-33 to 500°C -27 to 932°F	-9.9 to 199.9°C/°F: 0.1°C/°F Above 200°C or below -10°C/°F: 0.1°C/°F	±2.0% of reading or ±2.0°C which one is greater
Display Type	LCD (lighted)		
Response Time	1 sec.		
Operating Temperature	0 to 50°C / 32 to 122°F; <90% RH		
Storage Temp & RH	10 to 40°C / 50 to 104°F; <65% RH		
IR Detection Wavelength	8 to 14 nm		
Emissivity	0.95		
Dimensions	6" x 1" x 1" (150 x 25 x 27 mm)		
Weight	2.61 oz (74 g)		

WARRANTY

Sper Scientific warrants this product against defects in materials and workmanship for a 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 break the waterproof seal and 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
(480) 948-4448

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 of purchase.