

# **IR Thermometer Gun 12:1**

**800103**

**Instruction Manual**

SPER  
SCIENTIFIC

---

Environmental Measurement Instruments

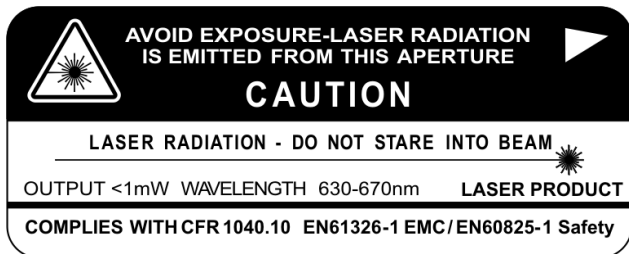
## CONTENTS

INTRODUCTION .....	2
SAFETY SPECIFICATIONS .....	3
DISPLAY & BUTTON LOCATIONS .....	4
MEASURING PROCEDURE .....	5
NOTES .....	6
CLEANING .....	6
BATTERY REPLACEMENT .....	6
SPECIFICATIONS .....	7
WARRANTY .....	8

## INTRODUCTION

Simply hold the IR gun, press the trigger and aim the laser guide at the target. Temperature results immediately appear on the display.

Features include laser guide, 4-digit backlit LCD, wide measuring ranges, °C/°F selectable, and automatic shut off. A 9V battery is included.



## SAFETY SPECIFICATIONS

Read the following safety information carefully before attempting to operate or service the IR Gun.

- Only qualified technicians should perform repairs.
- DO NOT submerge the IR Gun in water.
- Protect the IR Gun from water, shock, dust, and extreme environments.
- The IR Gun may be used to measure body temperature simply for reference. This unit is not intended for medical evaluations.
- Dispose of properly.
- Contains a laser pointer. Keep away from children.

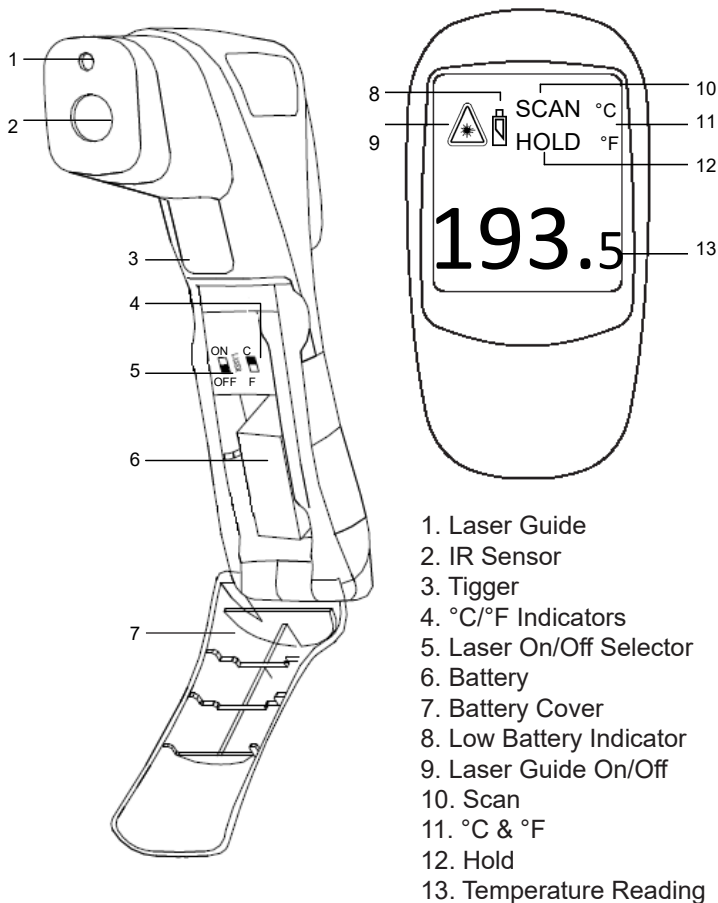


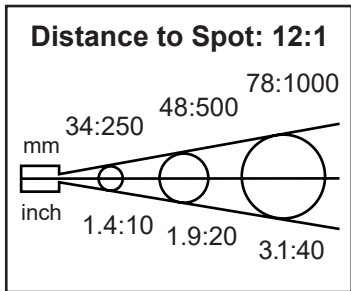
**Conforms to the following standards.**

- EN61326: Electrical equip. for measurement/control/labs.
- IEC61000-4-2: Electrostatic discharge immunity test.
- IEC61000-4-3: Radiated, radio freq. electromagnetic field immunity test.
- IEC61000-4-8: Power freq. magnetic-field immunity test.
- CFR 1040.10 subchapter J Class II Laser Product

Tests were conducted using a freq. range of 80 to 1000MHz with the IR Gun in 3 orientations. The average error for the 3 orientations is  $\pm 0.5^{\circ}\text{C}$  ( $\pm 1.0^{\circ}\text{F}$ ) at 3V/m throughout the spectrum. However, between 781 to 1000MHz at 3V/m, the IR Gun may not meet its stated accuracy.

## DISPLAY AND BUTTON LOCATIONS





## DISTANCE-TO-SPOT

The distance-to-spot ratio is 12:1. As the distance from the object increases, the spot size of the area measured by the gun also increases.

## MEASURING PROCEDURES

For best results, allow the thermometer to adjust to the ambient temperature for 30 minutes before use. For accurate readings, the IR lens must be clean.

1. Slide the Laser ON/OFF Selector (5) to turn the Laser Guide (1) on or off.
2. Slide the °C/°F Selector (4) to switch temperature units.
3. Point the IR Gun at the object to be measured.
4. Pull and hold the Trigger (3) to obtain a continually updated temperature until the trigger is released. "SCAN" (10) flashes on the display.
5. Release the Trigger (3), "HOLD" (12) and last temperature reading is displayed for about 6 seconds until the thermometer turns off.

## NOTES

- Your reading may fluctuate if the IR Gun is moved during measurement.
- Emissivity is the ability of an object to emit or absorb energy. The factory set emissivity value of 0.95 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 is covered with frost, clear the frost to expose the surface prior to measurement.

## CLEANING

Clean the lens with compressed air, use a soft brush, or carefully wipe the surface with a moist cotton swab. Do not use solvents on the lens. The housing may be cleaned with mild soapy water on a cloth or sponge.

## BATTERY REPLACEMENT

1. Replace the battery when the **LOW BATTERY INDICATOR** is displayed.
2. Open the battery cover, install a fresh 9V battery and close the cover. Battery life expectancy is 16 hours.

## SPECIFICATIONS

D:S Ratio	12:1
Range	-32 to 535°C (-25 to 999°F)
Resolution	0.1°C/F
Accuracy	±3°C (±5°F) From -32 to -20°C (-25 to -4°F)
	±2°C (±3°F) From -20 to 100°C (-4 to 212°F)
	±2°C (±3°F) From 100 to 535°C (212 to 999°F)
Thermopile	5 to 14 μm
Response Time	500 ms
Operating Temp.	32 to 122°F (0 to 50°C) 10 to 90% RH
Emissivity	Fixed at 0.95
Dimensions	6 <sup>1</sup> / <sub>8</sub> " x 3 <sup>3</sup> / <sub>8</sub> " x 1 <sup>1</sup> / <sub>4</sub> " (156 x 88 x 32 mm)
Weight	6 oz (170 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 damage resulting from accident, misuse, or abuse of the product. To obtain warranty service, ship the unit postage prepaid to:

**SPER SCIENTIFIC LTD,**  
8281 E. Evans Rd., Suite 103  
Scottsdale, AZ 85260  
[www.sperscientific.com](http://www.sperscientific.com)

The defective unit must be accompanied by a description of the problem and your return address. Register your product online at [www.sperwarranty.com](http://www.sperwarranty.com) within 10 days of purchase.