

W89720

# INFRARED NON-CONTACT Thermometer



**PERFORMANCE  
TECH™**  
Tools for the Professional Technician

## Introduction

Compact rugged and easy to use. Just aim and push the button, read current surface temperatures in less than a second. Safely measure surface temperatures of hot or hard to reach objects.

## How it works

Any object radiates infrared energy if its temperature is above absolute zero. This energy travels at the speed of light in all directions. An infrared thermometer lens collects and focuses the infrared energy onto a sensor. The sensor produces a small voltage output, proportional to the target temperature, which is processed and displayed.

## Cautions

The infrared thermometer should be protected from the following:

- Electro Magnetic Fields (created by arc welders, induction heaters and similar items.)
- Thermal Shock (caused by large or abrupt ambient temperature changes. Allow 30 minutes for unit to stabilize before use.)
- Do not leave the unit on or near objects of high temperature.

## WARNING

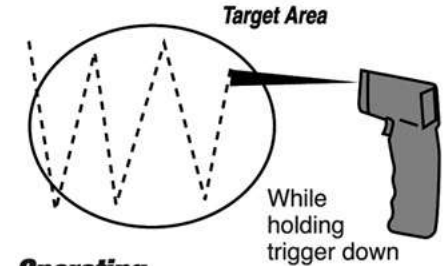
Do not point laser directly at eye or indirectly off reflective surfaces.

## CAUTION

**LASER RADIATION**  
Do not stare into beam  
Class II Laser Product  
Max. Power Output < 1mw  
Wavelength: 670 nm

## Instructions

- 1) Pull and hold trigger (laser pointer is on as default setting) to turn on, LCD display reading & battery icon. Release the trigger and the reading will hold for approx. 15 secs.
- 2) Locating a hot spot: Aim the thermometer outside the area of interest. Scan across the area in an up and down motion until the hot spot is located while holding the activation trigger. The thermometer will continue to read the surface temperature while the activation trigger is depressed.



## Operating

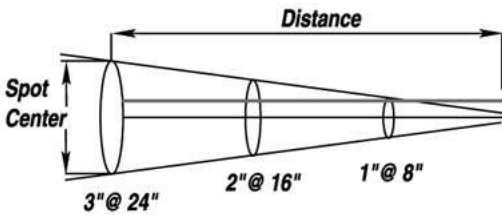
Fahrenheit & Celsius Conversion: Press the F°/C° button to switch from Fahrenheit to Celsius readings.

Press the Laser ON/OFF button the turn the laser pointer on or off.

The object being tested should be larger than the spot size calculated by the field of view diagram printed in this manual or on the unit itself.

## Field of View

The farther the thermometer is from the target, the larger the target area will be. This relationship between distance and target size is normally expressed as the distance to spot, or D:S ratio. At a distance of 8 feet, the "target" spot would be 1 foot in diameter. The thermometer will display the average temperature across the target area.



Distance to Spot size = 8:1

## Emissivity

Most organic materials and painted or oxidized surfaces have an emissivity of 0.95. This unit is preset at 0.95. Inaccurate readings will result from measuring shiny or polished metal surfaces.



## Maintenance

To clean the lens: Blow off loose particles using clean compressed air. Gently brush remaining debris away with a moist cotton cloth.

Do not use solvents to clean the lens.  
Do not submerge the unit under water.

## Specifications

|                         |  |
|-------------------------|--|
| Temperature Range       | 0° to 960° F<br>-18° to 520° C             |
| Accuracy                | +3°F +2°C                                  |
| Repeatability           | 2% or 3°F                                  |
| Response Time           | 500mSec, 95%                               |
| Spectral Response       | 7-18 um                                    |
| Emissivity              | 0.95                                       |
| Ambient Operating Range | 32° - 105°F                                |
| Relative Humidity       | 10-95% RH<br>noncondensing<br>@ up to 86°F |
| Storage Temp            | -4° to 150°F<br>without battery            |
| Weight                  | .33 lb                                     |
| Dimensions              | 6.3 X 3.54 X 1.7"                          |
| Power                   | 9v   |
| Battery Life            | 12hrs                                      |
| Distance to Spot        | 8:1  |



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