

# Infrared Thermometer Models CA870, CA872 & CA876



The Infrared Thermometer Models CA870, CA872 and CA876 are non-contact infrared temperature measuring instruments. Features include a 3½ digit backlit LCD, auto-hold function and auto power off (15 seconds). The MEAS button is used to extend the battery life by automatically stopping measurement temperature and holding the display reading. The Models CA876 and CA872 feature a laser guide for precise measurements. The Model CA876 includes a K thermocouple input for taking temperature measurements, MIN and MAX recording features, an alarm feature which allows specified Lo or Hi values to be programmed and adjustable emissivity from 0.1 to 1.00.

## Features

- Easy one-hand operation
- Non-contact infrared sensor
- Laser guide for precise aim (Models CA876 and CA872)
- Measures temperature in °F and °C
- High 1022°F/550°C measurement (Model CA876)
- Fixed 0.95 emissivity (Models CA872 and CA870)
- Adjustable emissivity 0.1 to 1.00 (Model CA876)
- Auto-HOLD function
- 2000-count backlit LCD
- Lightweight and compact
- Includes rugged, shockproof, protective, dirt resistant holster

## Applications



- Electrical troubleshooting
- Food safety and processing
- Automotive repair and maintenance
- Marine maintenance and repairs
- Test faulty motor winding insulation
- Test overheated high voltage transformers
- Test terminals on circuit breaker panels
- Perform HVAC energy audits

**Test Equipment Depot**  
**99 Washington Street**  
**Melrose, MA 02176-6024**

# Specifications

MODEL	CA870	CA872	CA876
<b>MEASUREMENTS – Infrared</b>			
Temperature Range	-4° to 500°F or -20° to 260°C	-4° to 500°F -20° to 260°C	-4° to 1022°F or -20° to 550°C
Display Resolution	1°F or 1°C	1°F or 1°C	1°F or 1°C
Accuracy	±2% Reading or ±6°F/3°C	±2% Reading or ±6°F/3°C	±2% Reading or ±6°F/3°C ≥ 212°F(100°C)
Response Time	1 second	1 second	1 second
Emissivity	Preset 0.95	Preset 0.95	Adjustable 0.10 to 1.00
Sensor	Thermopile	Thermopile	Thermopile
Optical Lens	Fresnal Lens	Fresnal Lens	Fresnal Lens
Laser	-	< 0.5mW (670nm)	< 0.5mW (670nm)
<b>MEASUREMENTS – K Type</b>			
Temperature Range	-	-	-40° to 2000°F or -40° to 1350°C
Display Resolution	-	-	1°F or 1°C or 0.1°F or 0.1°C (auto)
Sensor	-	-	K thermocouple
Accuracy	-	-	-40° to 2000°F: ±0.1% of Reading + 2°F plus t/c -40° to 2000°F: ±0.1% of Reading + 1°F plus t/c
<b>MECHANICAL</b>			
Display	3½ digit liquid crystal display (LCD), 2000-count		
Operating Temperature	32° to 122°F (0° to 50°C), <80% RH		
Storage Temperature	-4° to 140°F (-20° to 60°C), 0 to 80% RH without battery		
Polarity	Automatic		
Power Source	9V Alkaline battery		
Low Battery Indication	[- +] is displayed when battery voltage is low		
Dimensions	6.81 x 2.38 x 1.5" (173 x 60.5 x 38mm)		
Weight	Approx. 6.5 oz (183g) including battery	Approx. 6.5 oz (183g) including battery	Approx. 9 oz (255g) including battery



Laser guide allows you to take accurate and safe temperature measurements on extremely hot surfaces.



1. Mode selector
2. MAX button  
(Up arrow on Model CA876)
3. Measurement button
4. Low battery indicator
5. 3½ digit display
6. Laser ON (Models CA872 & CA876)  
(Down arrow on Model CA876)



Model CA870 with infrared thermopile temperature sensor



Model CA872 with Infrared thermopile sensor and laser guide for precise aim

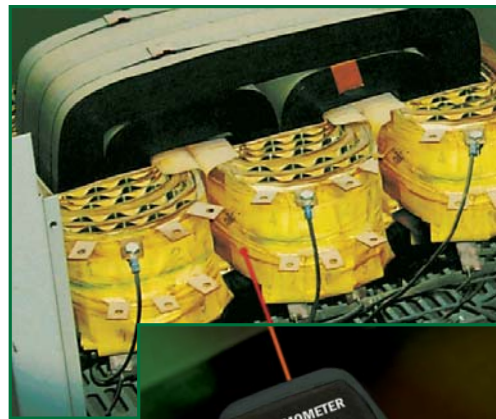
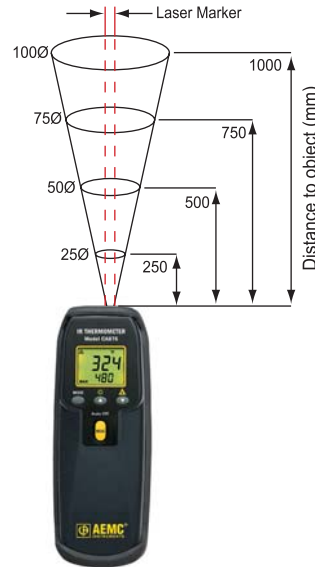


Model CA876 has both infrared thermopile sensor with laser guide for accuracy and K-type thermocouple input

### Field of View (FOV) ratio = 10:1 (Distance to Diameter)

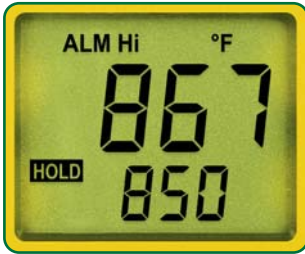
The FOV is the ratio of the distance from the target to the target diameter. When the target diameter is small, it is important to bring the thermometer closer to the target to insure that only the target is measured, excluding the surroundings. The measurement size is one-tenth the distance to the target.

FOV ratio = 10:1 = Distance : Diameter



# FUNCTIONAL DISPLAYS

## Model CA876



The Model CA876 features an alarm function which allows Hi and Lo values to be programmed by using the MODE button in conjunction with the up/down arrow keys. When the programmed Hi or Lo value is exceeded, the instrument emits an alarm tone and ALM Hi or ALM Lo will appear in the display.



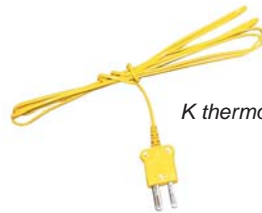
The Model CA876 has the ability to take infrared measurements as well as K thermocouple measurements and to display both values simultaneously.



The Model CA876 offers MIN and MAX functions which will keep track of and display the minimum (or maximum) temperature measured during the test.



The Model CA876 allows the operator to set the emissivity (ε) from 0.1 to 1.00.



K thermocouple included with Model CA876

**www.testequipmentdepot.com**  
**800-517-8431**  
**781-665-0780 FAX**

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### ORDERING INFORMATION

### CATALOG NO.

Infrared Thermometer Model CA870 .....	Cat. #2121.30
Infrared Thermometer Model CA872 (Laser) .....	Cat. #2121.31
Infrared Thermometer Model CA876 (Laser, Var ε, K thermocouple) .....	Cat. #2121.34
Includes K-thermocouple, 9V Alkaline battery, rugged, shockproof, protective, dirt resistant gray holster and user manual	