

Thermometer 480

infrared, for measuring surface temperature
and internal temperature



292.480

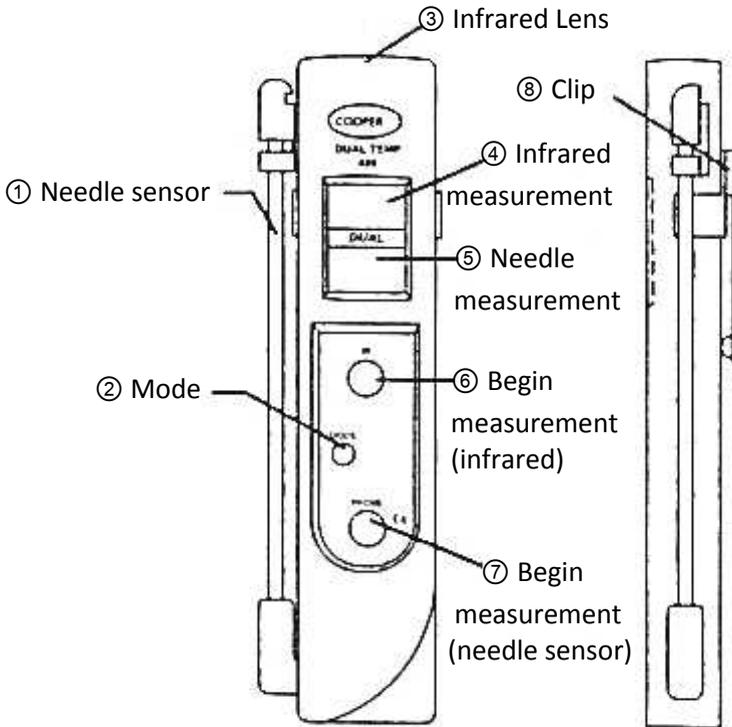
Description on back of packaging

- IR measurement range: -27 to 428°F (-33 to 220°C)
- Precision: $\pm 4^{\circ}\text{F}$ (2°C) or $\pm 2\%$ of measurement depending on greater value
- Emission strength: 0.95 factory setting, set at intervals of 0.1 up to 1
- Measurement range of thermal element: -67 to 626°F (-55 to 330°C)
- Precision: $\pm 2^{\circ}\text{F}$ (1°C) or $\pm 1\%$ of measurement depending on greater value
- Definition: 0.1°F (0.1°C) (switched)
- Battery: CR2032

Description on front of packaging

Dual-Temp. Infrared Thermometer with needle sensor

- Touch-free infrared thermometer for measuring surface temperatures
- Collapsible thermal needle sensor for measuring internal temperature
- Min./max. memory function
- Stay-on function for longer measurements
- Automatic-off function, battery charge indicator



Instructions for use

The thermometer is a touch-free infrared thermometer equipped with a needle thermal sensor. It can only function in one mode at a time, but those modes can be switched as desired.

- Pressing the begin infrared measurement button ⑥: immediately activates the touch-free infrared thermometer function (IRT mode).
- Pressing the begin needle sensor measurement button ⑦: immediately activates the contact thermometer function (COT mode).



To switch directly from COT mode to IRT mode, press button ⑥ when COT is in "Standby mode (Hold)".

Infrared touch-free thermometer function (IRT mode)

Set the thermometer using ③ on the object being measured and press button ⑥ to display the surface temperature. The proportion of distance to target is 1:1. This is why the thermometer should be held as close as possible to the object being measured.

MINIMUM AND MAXIMUM MODE

While taking measurement the thermometer will display the minimum or maximum value until button ② is pressed.

To activate minimum mode press ⑥-②-⑥. Press button ⑥ to begin measurement.

To activate maximum mode press ⑥-②* twice-⑥. Press button ⑥ to begin measurement.

Stay-on function

The stay-on function is useful for measuring temperatures over longer periods of time. The thermometer displays the temperature constantly for a period of up to 60 minutes or until button ⑥ is pressed.

To activate the stay-on function press ⑥-②* three times-⑥.

°C OR °F MODE

To switch between °C (Celsius) and °F (Fahrenheit), press ⑥-②* four times- ⑥.

EMISSION STRENGTH

The infrared thermometer comes factory preset at an emission strength of 0.95. This value can be changed by 0.10 (10E) up to 1 (100E). These changes can be made only by specially-trained personnel. Information concerning emission levels of particular materials can be received from your local sales agent.

Tip: The touch-free infrared thermometer should not be used for measuring temperatures of shiny or polished metallic surfaces. To change the emission strength, press ⑥-②* five times -⑥ for each change of 0.01 (1 E) -②.

Touch thermometer function (COT mode)

Insert the needle sensor ① into the object being measured and press ⑦ to display the temperature for up to 4 minutes. After this time, the unit will turn off automatically to save battery power. Pressing ⑦ will stop the measurement and display the last temperature along with the message "Hold". To resume measurement, press ⑦ again.

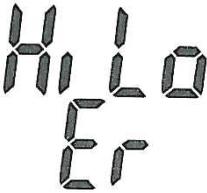
1. Do not bend or rotate the needle sensor in the wrong direction.
2. Placing too much pressure on the sensor may cause damage.

STORAGE AND CLEANING

The sensor lens is the most sensitive element of the thermometer, and as such must be kept clean. Clean the device carefully, using a soft cloth or cotton swab dipped in water or pharmaceutical alcohol. Wait for the lens to dry thoroughly before using. Do not immerse the thermometer in fluids. Store the unit at temperatures between -4°F and +149°F (-20°C and +65°C).

ERROR MESSAGES- LCD

The thermometer displays the following diagnostic messages:



"Hi" or **"Lo"** is displayed when the measured temperature exceeds the unit's range. **"Hi"** if the temperature exceeds +428°F (+220°C) and **"Lo"** if it falls below -27°F (-33 °C) (both in touch-free infrared mode) (In "touch needle sensor mode" the LCD display shows **"Hi"** when the temperature exceeds +626°F (+330 °C) and **"Lo"** when it falls below 67°F (-55°C).

When any error message appear it is necessary to reset the thermometer. To reset the thermometer, turn the unit off, remove the battery and wait at least one minute before replacing the battery and turning the unit on. If the error message continues to display, contact your customer service agent.

BATTERY

The thermometer is equipped with a batter charge indicator:



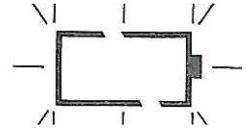
„Sufficient battery charge“:

Measurements can be taken.



„Low battery charge“:

Battery should be replaced soon but measurements can still be taken



„Empty battery“:

No measurements can be taken



When the **"Low battery charge"** indicator comes on, replace the battery with an appropriate lithium battery type CR2032. **Remember: Before replacing the battery, turn the unit off. Failure to do so can result in malfunctioning of the unit.**



Dispose of the used battery properly.

TECHNICAL INFORMATION

Article	Touch-free infrared mode	Needle sensor mode
Measurement range:	-27 to 428 °F (-33 to 220 °C)	-67 to 626 °F (-55 to 330 °C)
Precision:	± 2% of measurement or +4 °F (2 °C), depending on the greater value	± 1% of measurement or ± 2 °F(1 °C), depending on the greater value
Battery use:	30 hours of continuous functioning (auto-off after 15 seconds)	
Dimensions:	W 33 x D 22 x H 160 mm	
Weight:	2.6 oz (74 g) with battery	

EMC/RFI

Measurements and readings can be affected if the unit is used in the vicinity of strong, high-frequency electromagnetic fields (e.g. radio frequencies) with a field strength of approx. 3 Volts/m, but this has no long-term effect on the measurement strength.

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