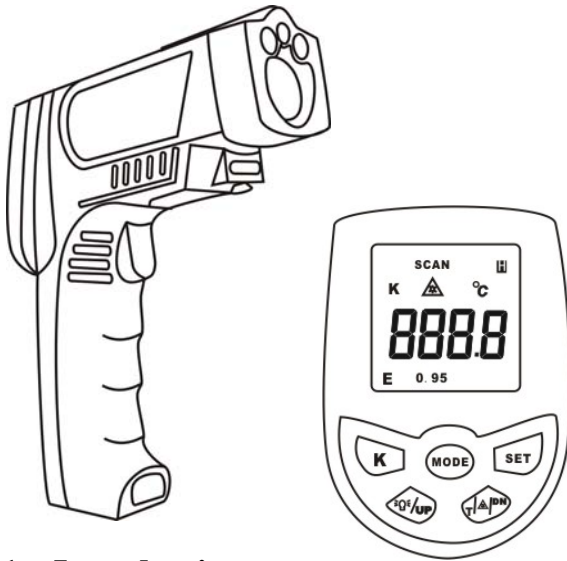


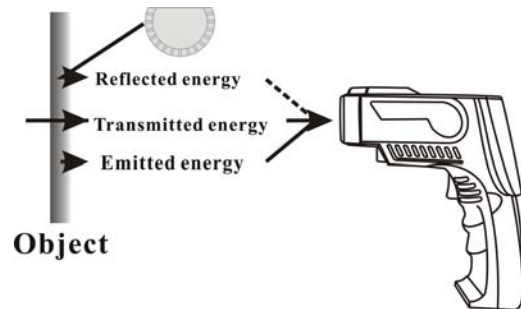
Non-contact infrared thermometer Instruction manual

Model:880E / EK



1、 Introduction

Compact, rugged and easy to use. Just aim and pull the trigger, read current surface temperatures in less than a second. Safely measure surface temperatures of hot, hazardous or hard-to-reach objects without contact.



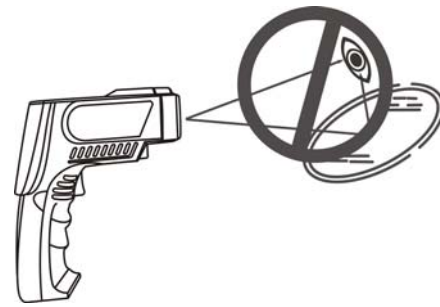
How it works

Infrared thermometers measure the surface temperature of an object. The unit's optics sense emitted, reflected, and transmitted energy which is collected and focused onto a detector. The unit's electronics read transmitted energy and display temperature on the screen. For increased ease and accuracy the laser pointer makes aiming even more precise.

Cautions

Infrared thermometer should be protected for the following:

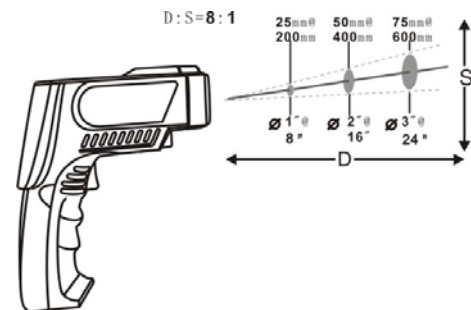
- EMF (electro-magnetic fields) from arc welders, induction heaters.
- Thermal shock (caused by large or abrupt ambient temperature changes, allow 1 hours for unit to stabilize before use).
- Do not leave the unit on or near high temperature objects.



Warning

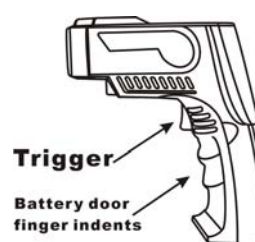
Do not point laser at eye either directly or indirectly off reflective surfaces.

1. When taking measurement, point thermometer toward the object to be measured and hold the yellow trigger. The object being tested should be larger than the spot size calculated by the field of view diagram.
2. Distance & spot size: As the distance from the object increase, the spot size of measuring area becomes large.

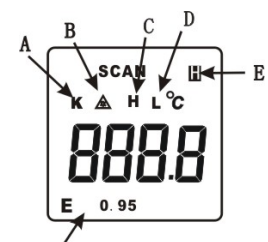


3. Field of view: Make sure the target is larger than the unit's spot size. The smaller the target the shorter the measuring distance. When accuracy is critical, make sure the target is at least twice as large as the spot size.
4. Emissivity: Most organic materials and painted or oxidized surfaces have an emissivity of 0.95. Inaccurate readings will result from measuring shiny or polished metal surfaces. To compensate, cover the surface to be measured with masking tape or flat black paint. Measure the tape or painted surface when the tape or paint reach the same temperature as the object being measured.

2、 Quick start instruction



(Figure1)

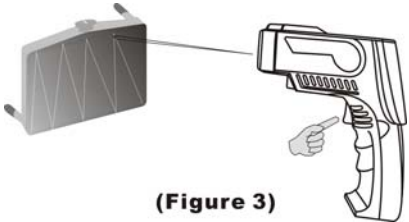


(Figure2)

- Open battery door, install battery correctly. Pull the trigger, LCD display reading & battery icon. Release the trigger and the reading will hold for 7 seconds.

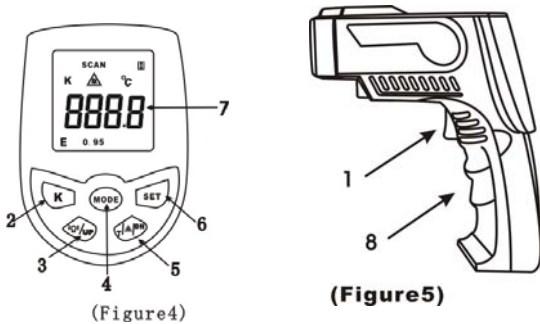
LCD display:

- A K type thermocouple indicator
- B Laser pointer on indicator
- C High temperature alarm indicator
- D Low temperature alarm indicator
- E Data Hold
- F Emissivity setting



(Figure 3)

- Locating a hot spot aim the thermometer outside the area of interest, then scan across with up and down motions until you locate the hot spot.(turn on the laser for accurate measurement)

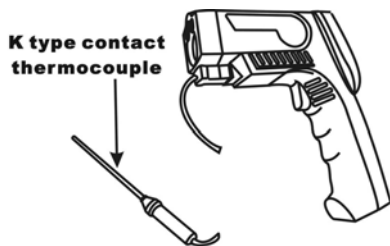


(Figure4)

(Figure5)

3. Diagram description

- Trigger : Press for turn on, and then display reading, holds data for 7 seconds automatically ("HOLD") after releasing. Turns off automatically after 30 seconds without using.
- K type thermocouple button : Press to turn on K-type thermocouple mode (880EK model)
Note : As a result of different measurement technologies IR and Thermocouple readings may vary slightly, this is normal.



- MODE button : Press MODE button for cycle options - MAX - AVG - MIN -HAL -LAL mode
A, MAX : Display maximum reading.

B, MIN : Display minimum reading.

C, AVG : Calculate the average of all readings.

D, HAL : High temperature alarm. Option HAL mode, press "UP/DN" button to set alarm temperature. When "H" is displayed reading exceeds the alarm temperature.

E, LAL : Low temperature alarm. Option HAL mode, press "UP/DN" button to set alarm temperature. When "L" is displayed reading is below the alarm temperature.

- SET button : Press to set emissivity then press "UP/DN" for adjust from 0.1~1.0. Press SET button again to exit setting mode .
- Back light /Up button :In "Alarm temperature" and "setting emissivity" mode to adjust value up. In other mode turns on back light. When product working, press it to turn on back light, press again to turn off.
- T/ Laser pointer/ DN button : In "Alarm temperature" and "setting emissivity" mode to adjust value down . When product working, press it and trigger together to turn on laser pointer, press both again for turn off. When turn on product press for °C/°F selection.

(7) LCD

(8) Battery door: For replacing battery, please use the finger indents to open the battery door.

3、Maintenance

- Lens cleaning: Blow off loose particles using clean compressed air. Gently brush remaining debris away with a moist cotton cloth.
- Case cleaning: Clean the case with a damp sponge/cloth and mild soap.
- Please remove the battery if not in use for long periods.

Note:

- Do not use solvent to clean lens.
- Do not submerge the unit in water.

4、specifications

Temperature range	-30°C to 550°C(-22 to 1022°F) Note :Measurement Range while using NTC: -30°C to 400°C(-22 to 722°F)
Accuracy	±3°C or ±3% of rdg, -30°C to 0°C(-22 to 32°F) ±2°C or ±2% of rdg, 0°C to 100°C(32 to 212°F) ±3°C or ±3% of rdg, ≥100°C(212°F)
Repeatability	1% of reading or 1°C
Response time	500msec, 95% response
Spectral response	8-14um
Emissivity	0.1 ~ 1.0 adjustable
Ambient operating range	0°C to ~40°C(32 to 104°F)
Relative humidity	10-95% RH noncondensing
Storage temperature	-20~60°C(-4~140°F) without battery
Weight/dimensions	130g; 146×80×38mm
Power	9V Alkaline or NiCd battery
Battery life(alkaline)	Laser models: 12hrs
Display spot size	8:1