

Infrared Thermometer Instruction Manual



Version: WT3656-EN-00

A. Introduction

Infrared thermometer determines surface temperature of an object by measuring the infrared energy radiated from object surface. This instrument is composed of optical system, photoelectric sensor, signal amplifier, signal processing circuit and LCD display. The optical system converges infrared energy radiated from object surface to photoelectric sensor, then the photoelectric sensor converts the energy into corresponding electrical signal which is further translated into readings and displayed on LCD via signal amplifier and signal processing circuit.

B. Safety Instruction

1. Warning

To avoid possible harm that may be caused to users, please follow the instruction below: temperature on the transparent surfaces cannot be measured with the instrument such as glass and plastic; otherwise the value measured by the instrument is actually surface temperature of the transparent object. Vapor/dust/smoke or other particles hinder the performance of the instrument lens and thus affect the measurement accuracy.

2. Note:

To avoid damaging thermometer or equipment to be tested, please protect them from the following influence: EMF (electromagnetic field) generated by equipment like arc welding machine and induction heaters etc., Thermal shock resulting from large environmental variation in which case the instrument must be placed in the new environment for 30 minutes so as to a new stabilization is obtained. Do not place the instrument on the hot object.

C. Measurement Distance

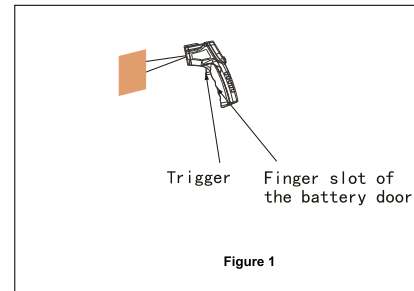
In measuring temperature, please pay attention to the distance between the instrument and the area to be measured, the longer the distance is, the bigger the measured area will be. For this instrument, the distance between the measuring hole and measured area is within 2~5cm.

D. Emissivity Rate

Emissivity rate of most organic materials including paint or oxidizing materials is 0.95 which is preset in the instrument). The instrument cannot measure smooth or polished metal surfaces. Emissivity of human skin is 0.95~0.98.

E. Operation Instruction

1. Quick measurement:
 - 1.1 Open the battery door and install two 1.5V AAA batteries;
 - 1.2 Pull the trigger for startup;
 - 1.3 Keep the distance between the measuring hole and the object to be measured within the range of 2~5cm.
 - 1.4 Lo indicates that the temperature of the object measured is lower than 32°C while Hi for temperature higher than 42°C.



F. LCD and button functions

1. LCD: as shown in Figure 2

- A. Data holding
- B. Data reading
- C. Backlight
- D. Low battery
- E. Self-calibration
- F. Emissivity
- G. Maximum
- H. Minimum
- I. Temperature reading
- J. Measuring unit

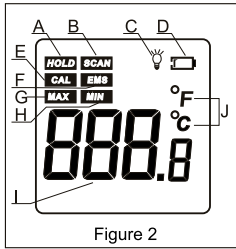


Figure 2

Note: the values of MAX or MIN so called is referred to the maximum or minimum value of single operation of measurement while hold on the trigger button during measuring and then press the Mode button to change to the MAX or MIN mode to check the current maximum or minimum value picked up.

c. EMS: under this mode, C/F button can be used to select emissivity of 0.95. For example, if the real temperature of an object given is 26.3°C while the temperature reading currently measured is 25.0°C that is 1.3°C less than the real temperature, press the Mode button to enter into calibration mode and increase the value by 1.3°C via C/F button, and then go back to measuring the measuring mode by pressing the MODE button again after completion of this calibration.

(4) Backlight button

G. Maintenance

1. Lens cleaning: Use clean compressed air to blow away dust, then brush away the remaining with camel hair cloth, and wipe the surface carefully with damp cotton cloth.
 2. Shell cleaning: use damp sponge or soft cloth wet with soap water to clean shell
- Note:
- 1) Do not use any solvent to clean the plastic lens;
 - 2) Never immerse thermometer in water;
 - 3) Replace the batteries when the low battery icon appears.

H. Technical parameters

Measurement range	32 ~ 42°C (89.6 ~ 107.6 F)
Accuracy	±0.3°C (±32.54 F)
Repeatability	0.3°C
Response time	500 mSec, 95% response
Spectral response	5-14 um
Emissivity	0.95 Preset
Operating environmental temperature	10°C ~ 35°C (50 ~ 95°F)
Relative humidity	10~90%RH non-condensing
Storage temperature	-20 ~ 60°C (-4~140 F)
Power supply	1.5V AAA*2 batteries
Typical battery life	12 hrs
Distance to spot size	2-5cm

Special statement:

our company is not liable for any derivative results of using this product, and reserves the right to change the design and the content of the manual for this product without further notification.

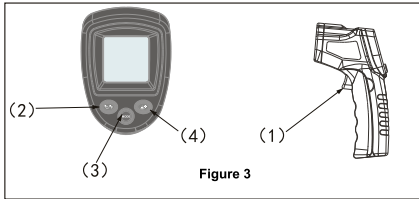


Figure 3

2. Button functions: as shown in Figure 3

- (1) Trigger: pull trigger to display temperature value with SCAN appearing. Release the trigger, then the HOLD appears with temperature value appearing, and the data measured held automatically. The instrument turns off automatically within 20 seconds if there is no further operation.
- (2) Temperature unit shift for shifting the unit between Celsius and Fahrenheit
- (3) Mode shift button: press it to shift the mode among MAX/MIN/EMS/measuring modes
 - a. MAX: Measuring the maximum value;
 - b. MIN: measuring the minimum value;