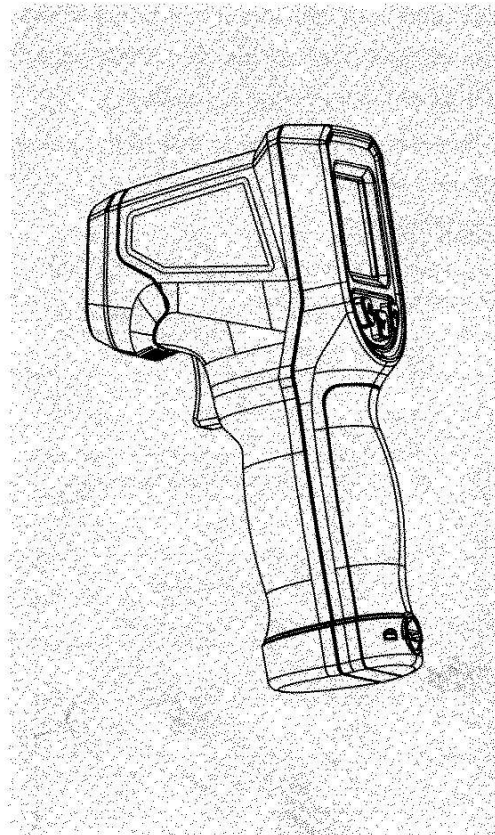


INFRARED THERMOMETER

INSTRUCTION MANUAL



A. INTRODUCTION

This infrared thermometer is used for measuring the temperature of the object's surface, which is applicable for various hot, hazardous or hard-to-reach objects without contact safely and quickly.

B. Warning & Cautions

1. Warning:

To avoid the potential situation may cause harm or damage to people, please pay attention to the following items:

- 1) Before you use this unit, check on the plastic housing carefully. If there is any damage, do not use it.
- 2) Do not point laser directly at eye or indirectly off reflective surfaces.
- 3) Do not use this unit in the environment of explosive gas, steam or dusty.

2. Caution:

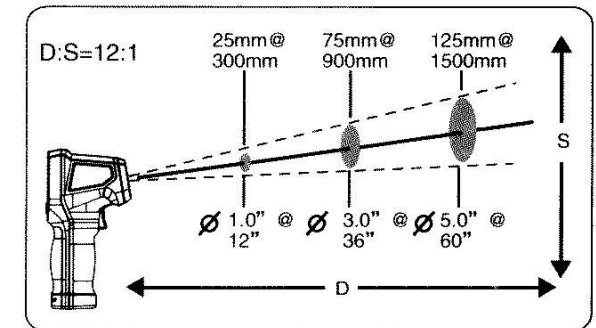
To avoid the damage of the unit or the target, please protect from the following situations:

- 1) EMF (electro-magnetic fields) from arc welders, induction heaters.
- 2) Thermal shock (caused by large or abrupt ambient temperature changes-allow 30 minutes for unit to stabilize before use.
- 3) Do not leave the unit on or near objects of high temperature

C. Distance to Spot size

- 1) When take measurement, pay attention to the Distance to Spot rate. As the Distance (D) from thermometer to the target surface increases, the spot diameter (S) on the target surface becomes larger.

The Distance to Spot rate is about 12:1



2) Scope of observation:

Make sure that the measured target is larger than the measuring area. When the smaller target to be measured, please let infrared thermometer close to the target. In order to measure accurately, it is necessary to ensure that the target to be measured is at least twice as large as the measuring area.

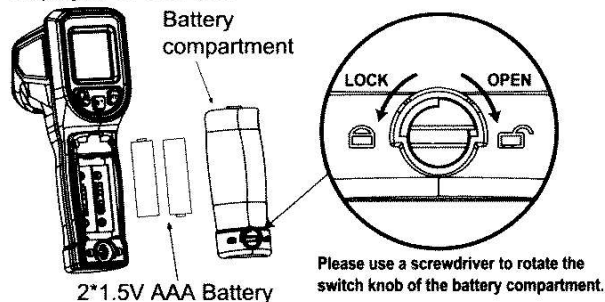
Remark:

Different material have different emissivity. The emissivity for most material is listed as below. For more accurate value, please choose adjustable thermometer, adjust right emissivity when measuring.

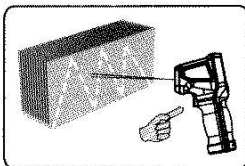
Emissivity parallel table							
Material	Emissivity	Material	Emissivity	Material	Emissivity	Material	Emissivity
Aluminum	0.30	Iron	0.70	Asbestos	0.95	brick	0.50
Bituminous	0.95	Limestone	0.98	Basalt	0.70	Oil	0.94
Brass	0.50	Paint	0.93	brick	0.90	Paper	0.95
Carbon	0.85	Plastic	0.95	ceramics	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90	Copper	0.95	Skin	0.98
Oil sludge	0.94	Snow	0.90	Frozen items	0.90	Steel	0.80
Hot food	0.93	Textile	0.94	Glass	0.85	Water	0.93
Ice	0.98	Wood	0.94				

D. Operation

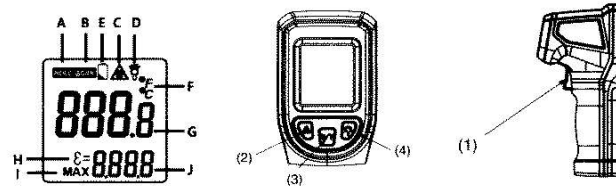
- 1) Open the battery compartment and insert the 2pcs 1.5V AAA batteries.
- 2) Single measuring: Pull and loose the trigger, laser point will open to find target (the laser is used for aiming only), The temperature of the target will be displayed on the LCD.



- 3) Continuous measuring: Pull the trigger and do not loose it, slowly move the thermometer, the thermometer scan the temperature of target and display the temperature on the LCD continuously.



Indication:



A. Hold: when Single measuring to loose trigger(1), the symbol display, it means get the current temperature value.

B. Scan: when Continuous measuring to hold trigger, the symbol display, it means the thermometer is measuring continuously. And temperature value will be displayed at "G" position, Max temperature value during continuous measuring will be displayed at "J"

C. Laser point: Press key(2) to turn on or turn off the symbol, the laser point is used for aiming target only.

D. Backlight: Press key(4) to turn on or turn off the symbol, it means switch on/off backlight of LCD.

E. Power: Battery capacity indication.

F. Temperature Unit: Press key(3) to switch centidegree and Fahrenheit degree.

G. Temperature value.

H. Emissivity symbol.

I. Max symbol.

J. Max temperature value or Emissivity: long press key(3) , preset emissivity 0.95 will be displayed at "J" position, press key(2) or key(4) to increase or reduce emissivity, then press key(3) to save emissivity.

Model:

- 1) Open the battery compartment and insert the 2pcs 1.5V AAA batteries.
- 2) Single measuring: Pull and loose the trigger, laser point will open to find target (the laser is used for aiming only), The temperature of the target will be displayed on the LCD.

- 3) Continuous measuring: Pull the trigger and do not loose it, slowly move the thermometer, the thermometer scan the temperature of target and display the temperature on the LCD continuously. And the max temperature value also display on the LCD during continuous measuring.

E. Maintenance

1. Lens cleaning: clean compressed air to blow away the debris, and then use camel hair brush to wipe away the residual small debris, and finally wipe the surface with wet cotton cloth carefully .
2. shell cleaning: use sponge or soft cloth to clean with soap and water .

F. Specification

Please pay attention to the different specification, It is a general manual for four models.

Temperature range	0.95 Preset, Unadjustable		0.95 Preset, Adjustable from 0.01 to 1.00	
Emissivity	-50~400°C (-58~752°F)	-50~600°C (-58~1112°F)	-50~400°C (-58~752°F)	-50~600°C (-58~1112°F)
Accuracy	≥0°C(32°F):±1.5°C(±2.7°F) or ±1.5% Take the maximum <0°C(32°F):±3°C (±5.4°F) or ±3%Take the maximum			
Spectral response	8-14um			
Resolution	1% of reading or 1°C			
Response time	500mSec, 95% response			
Distance to Spot Rate	12:1			
Max value display	NO		YES	
Operating Temperature	0~50°C (32~122°F)			
Operating Humidity	10-90%RH non-condensing			
Storage Temperature	-20~60 C (-4~140 F) Without Batteries			
Power	-20~60 C (-4~140 F) Without Batteries			