

Non-contact infrared thermometer

Instruction manual

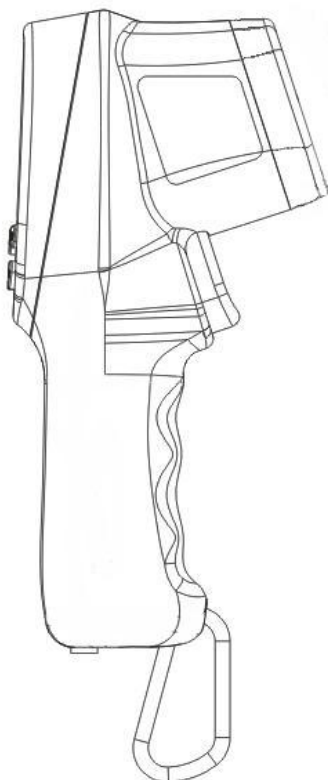


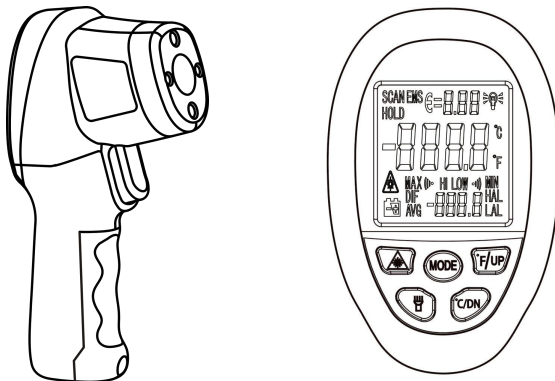
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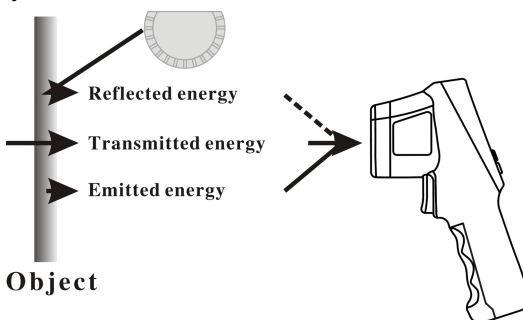
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1、Introduction

This thermometer is compact, durable and easy to use. Just press the trigger and aim at the measured object with a laser pointers. It can read the surface temperature of the object within 1 second. Safely measure the surface temperature of high-heat, dangerous or difficult-to-reach objects without contact.



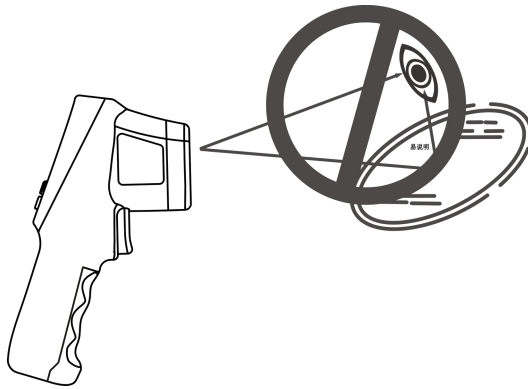
How it works

Infrared thermometer measures the surface temperature of the object. The unit's optics sense emitted, reflected, and transmitted energy which is collect and focused onto a detector. The unit's electronics transmitted energy which is display on the unit. For increased ease and accuracy this laser aims even more precise.

Cautions

Infrared thermometer should be protected from the following area:

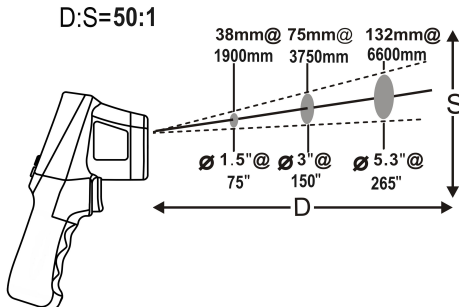
- EMF(electromagnetic fields), such as: arc weider, induction heaters.
- Thermal shock(cause by large or abrupt ambient temperature changes allow 1 hours for unit to stabilize before use).
- Do not leave the unit on or near objects of high temperature.



Warning

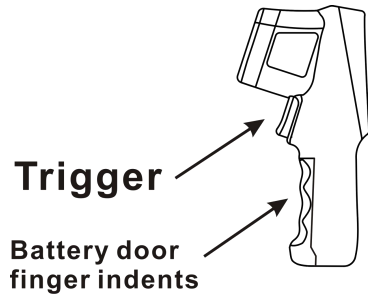
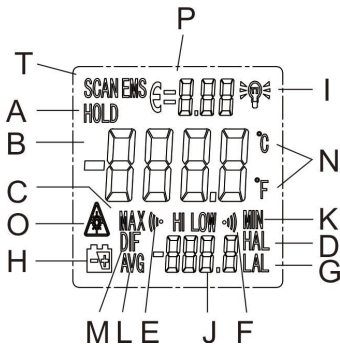
Do not point laser at eye or shine through the reflective surface to the eye.

1. Point thermometer toward the object and hold the yellow trigger to measure. The recommend ratio of the distance between the infrared thermometer and the measuring object to the diameter of the measuring object is 50:1
2. Distance & spot size: As the distance from the measured object increases, the spot size of measuring area should increase accordingly.



3. Emissivity: Most organic materials and painted or oxidized surfaces have an emissivity of 0.95. Glossy or polished metal surfaces may cause inaccuracy in measured values. In that case, you could cover the surface to be measured with masking tape or flat black paint. Measure the temperature after the tape or painted area reached the same temperature as the material underneath.

2、Quick start instruction

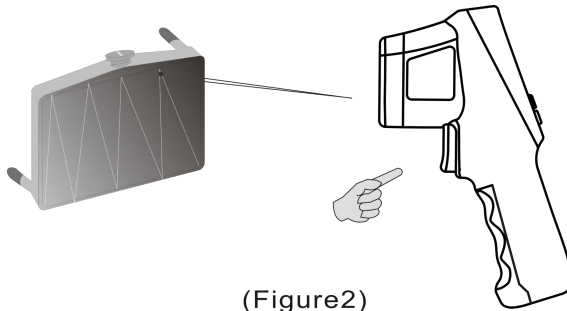


(Figure1)

1. Remove the battery cover screw with a screwdriver, and then slide out the battery door, install battery correctly. And assemble the battery cover. Pull the trigger, LCD display reading & battery icon. Release the trigger and the reading will hold for 30 seconds.

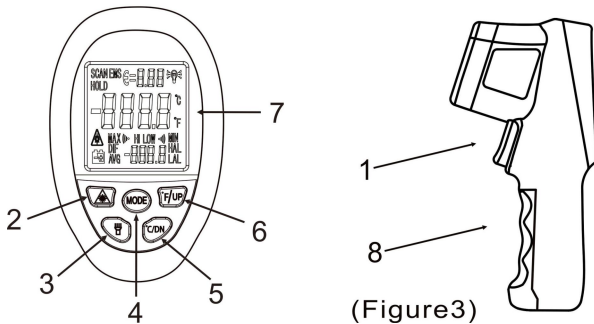
LCD display:

- A Data Hold
- B Main display value
- C Maximum
- D High temperature alarm temperature
- E Alarm of high temperature
- F Alarm of Low temperature
- G Low temperature alarm temperature
- H Low battery reminder
- I Flashlight on reminder
- J Second reading display(MAX/MIN/HAL/LAL/AVG/DIF)
- K Minimum
- L Average
- M The maximum and the minimum difference
- N Temperature of the unit
- O Laser pointer turn on prompt
- P Emissivity symbol
- T Scanning



(Figure2)

2. Locate a high temperature spot: Hold the trigger(As shown in figure 2), then scan across with up and down motions until you locate the hot spot.(please turn on the laser to for accurate measuring
3. Name and function of each part



(Figure3)

- (1) Trigger : Press to turn on, and then display test result and hold data automatically(display HOLD) after releaser the trigger. Trun off automatically after 30 seconds without operate.
- (2) Laser pointer button : press the button to turn on laser pointer, press again to turn off laser pointer.
- (3) Lamp : During the measurement, press it to turn on flashlight, press again to turn off.
- (4) MODE button: Press MODE button for cycle options - MAX - AVG - MIN - DIF - LAL - HAL mode. Long Press the button, enter setting emissivity and setting alarm temperature. Press button for cycle options: Setting emissivity- alarm of low temperature-alarm of high temperature. Long Press again to exit
 - A、 MAX: Measure maximum data ;
 - B、 MIN: Measure minimum data ;
 - C、 AVG: Calculate the average of all measure data;

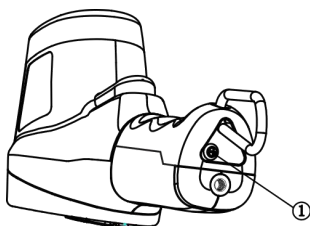
D、HAL: High temperature alarm. Into HAL mode, press “UP/DN” button to set alarm temperature. When LCD display ” (H HI” means measure result exceeded the alarm temperature;

E、LAL: Low temperature alarm. Into HAL mode, press “UP/DN” button for set alarm temperature. When LCD display ” LOW ” (L) means measure result lower than alarm temperature

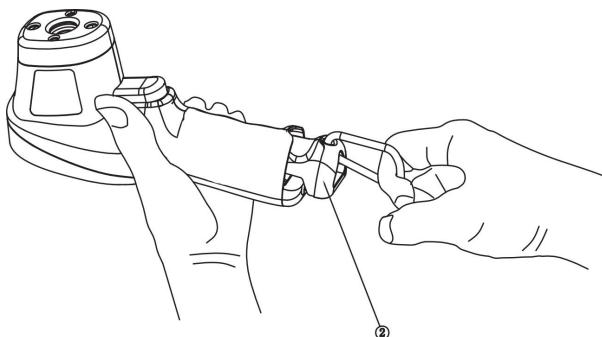
- (5) °C/DN button : In “Alarm temperature” and “setting emissivity” mode for low down value. In measurement mode, press to select °C
- (6) °F /UP button : In “Alarm temperature” and “setting emissivity” mode for raise value. In measurement mode, press to select 0F.
- (7) LCD
- (8) Battery door: Take off the screw from the bottom, then hold the D-shaped ring to slide the battery door off to replace a new battery.

Please follow the instruction and figure below:

1. Use the screwdriver to unscrew the bottom screw;



2. Catch the hook and take off the battery cover from the bottom;



3、Maintenance

- 1) Lens cleaning: Blow off loose particles using clean compressed air. Gently brush remaining debris away with a moist cotton cloth.
- 2) Case cleaning: Clean the case with a damp sponge/cloth and mild soap.
- 3) Please take out the battery when not using for a long time.

Note:

- 1) Do not use solvent to clean lens.
- 2) Do not submerge the unit in water.
- 3) Emissivity will be reset to the original value (0.95) after replacing battery, please adjust again if necessary.

4、specifications

Temperature range	-50°C to 1800°C(-58 to 3272°F)
Accuracy	±3% of rdg ±3°C, -50°C to 0°C(-58 to 32°F) ±2% of rdg ±2°C, 0°C to 100°C(32 to 212°F) ±3% of rdg ±3°C, ≥100°C(212°F)
distance spot ratio	50:1
Emissivity	0.1~1.0 adjustable
Resolution	0.1°C(0.1°F)<1000, 1°C(1°F)>1000
Repeatability	1% of reading or 1°C
Response time	<250msec, 95% response
Spectral response	8-14μm
Operating temperature	0°C to ~40°C(32 to 104°F)
Storage temperature	-20~60°C(-4~140°F) without battery
Relative humidity	Operating :10-95%RH; Storage: 10-95%RH
Ambient temp range of guarantee for accuracy	23°C~28°C
Weight/dimensions	160g; 192×95×63mm
Power	9V battery, 6F22 or NEDA 1604
Battery life	Laser mode :12hrs

Note:

Display above code in normal Ambient temp, probable means this meter was broken.

Attached list : Applicable Emissivity for Different Material (For reference only)

Material	Emissivity	Material	Emissivity
Asphaltum	0.90 to 0.98	Textile (Black)	0.98
Beton	0.94	Human Skin	0.98
Cement	0.96	Soap bubble	0.75 to 0.80
Sand	0.90	Charcoal (powder)	0.96
Soil	0.92 to 0.96	Lacquer	0.80-0.95
Water	0.92 to 0.96	Lacquer (reluster)	0.97
Ice	0.96 to 0.98	Rubber (Black)	0.94
Snow	0.83	Plastic	0.85-0.95
Glass	0.90 to 0.95	Timber	0.90
Ceramic	0.90 to 0.94	Paper	0.70-0.94
Marble	0.94	Chromic oxide	0.81
Gypsum	0.80 to 0.90	Copper Oxide	0.78
Compo	0.89 to 0.91	Iron Oxide	0.78 to 0.82
Brick	0.93 to 0.96	Stainless steel	0.2-0.3

The above product images and contents are for reference only. In case of any discrepancies or updates, please refer to the actual product without prior notice.