

# UT306A

## Mini Infrared Thermometer User Manual

### I. Introduction

UT306A is a mini infrared thermometer, that is able to determine the temperature of an object's by measuring the radiated infrared energy from its surface.

### II. Safety information

Warnings:

To avoid injury and damage, please read the following information before use.

- Do not point laser directly at persons or animals or indirectly off reflective surfaces.
- Do not look directly into the laser with optical tools (for example, telescopes, microscopes). Optical tools can focus the laser and be dangerous to the eyes.
- If low power indicator flashes on the screen, please replace the battery.
- Before using the product, please check it, if damaged, the surface cracks or the lack of plastic parts, do not use
- See emissivity information for actual temperature. Reflective objects result in lower than actual temperature measurements. These objects pose a burn hazard.
- Do not use the device if explosive gas, steam, moist surrounding.
- To ensure accuracy, place the device at current environment for over 30 mins.
- Avoid staying beside object with high temperature for long time.

### III. Specifications

Range	-35℃~300℃ (-31 F~ 572 F)
Accuracy Calibrated ambient temperature: 21℃~25℃(70 F~ 77 F)	≥0℃:±2.0℃ or ±2% of reading, whichever greater <0℃:±(2.0℃+0.1℃/℃) ≥32 F:±4.0 F or ±2% of reading, whichever greater <32 F:±(4.0 F+0.1 F/F)
Temperature coefficient	0.1℃/℃(0.1 F/F) or ±0.1% of reading per degree, whichever greater
Optical resolution	6:1(calculated when energy is 90%)
Emissivity	0.95

Response time	250ms(95% of reading)
Spectral response	8um ~ 14um
Display resolution	0.1℃(0.1 F)
Repeatability	±1.0℃(2.0 F) or ±0.1% of reading, whichever greater
Laser	IEC60825-1:2014 CLASS II, λ=630nm~670nm, <1mW
Battery type	AAA 1.5V*3
Battery life	≥20H(Work continuously with laser&backlight on)
Dimension	120mm*53mm*26mm
Weight	120g
Working temperature	0℃~ 50℃ (32 F~104 F)
Storage temperature	-20℃~ 60℃ (-4 F~140 F)
Working humidity	<Rh90% (non-condensation)
Working altitude	≤2000 meters
Storage altitude	12000m
Drop test	1 m

### IV. Safety standard

CE: EN61326-1: 2013 EN61326-2-2: 2013

Laser safety standard: EN60825-1: 2014

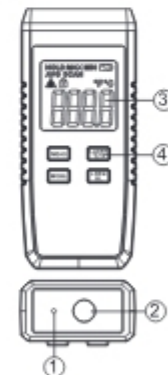
### V. Features

- Laser aiming
- Backlight
- Auto measurement
- MAX/MIN/AVG temperature measurement.
- Selectable temperature units
- Low power indication
- Data hold
- Auto power off
- Auto recording





### VI. Product description

Structure

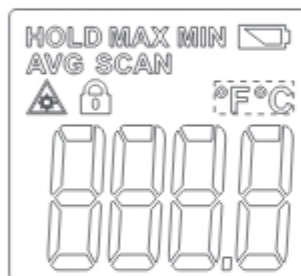
- 1.Laser emission spot
- 2.Infrared signal receiving terminal
- 3.Display screen
- 4.Buttons







## Buttons

-  : Power ON&Measurement
-  : Laser ON/OFF or Temperature unit switch
-  : Select MAX/MIN/AVG or real-time measurement
-  : Measurement lock or backlight ON/OFF


## Symbols





<b>HOLD</b>	Data hold
<b>MAX</b>	Maximum value
<b>MIN</b>	Minimum value
	Low power
<b>AVG</b>	Average value
<b>SCAN</b>	Scan measurement
	Laser ON
	Auto measurement
<b>°F/°C</b>	Temperature unit
	Reading

## VII. Operation instructions




### Power on

Short press  to switch on the device and record from last shutdown is displayed.

### Temperature measurement

Press  and hold, thermometer start scanning, SCAN symbol flashes on the screen. Laser is for aiming object being measured. Release  button to stop measurement. HOLD symbol appears while SCAN symbol disappears and laser is off. Result is displayed on the screen.



### Auto Measurement

After turn on the device, short press  button to activate measurement lock function.  symbol appears on the screen. Thermometer will conduct auto and continuous measurement without any operation. Short press LOCK/BL again to unlock the auto measurement.  symbol disappears and return to HOLD mode.


### Auto power off

The thermometer will automatically power off if without operation for 8 seconds.

### Laser ON/OFF

Turn on the thermometer, short press  to switch ON/OFF the laser. When laser is ON,  symbol appears.


### Temperature unit

Turn on the thermometer, long press  to switch temperature unit.

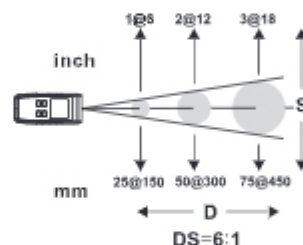
### Backlight

Turn on the thermometer, long press  to turn ON/OFF the backlight.

### Measurement modes

Turn on the thermometer, short press  to cycle switch between MAX, MIN, AVG, real-time measurement modes. Corresponding symbols appear to indicate the current measurement mode. MAX/MIN/AVG symbols disappear when measuring real-time temperature.

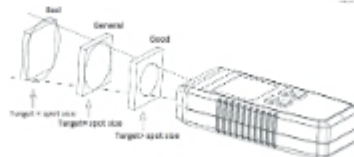
### Distance and spot size



### Field of view

Make sure the target is larger than the spot size.

The smaller the target the closer measure distance. Suggest distance  $\leq (15\text{cm}/6\text{ inch})$ .



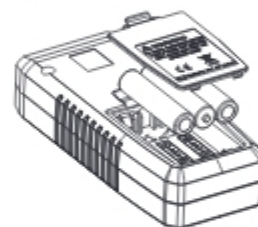
## VIII. Maintenance

### Clean

- 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 cloth and mild soap.

### Battery replacement

Replace the battery as the below shown



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