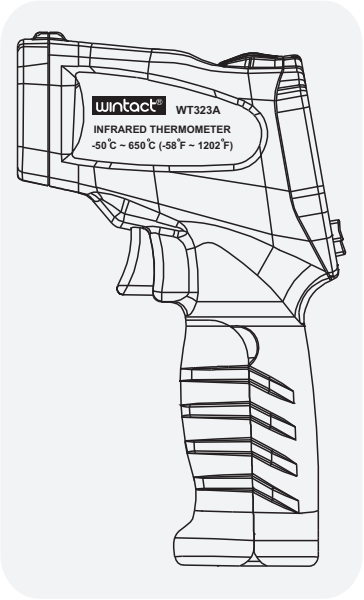
wintact®

MODEL: WT323A

Infrared thermometer

Instruction manual



Version：WT323A-EN-00

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-toreach objects without contact safely and quickly.

This unit consist of Optics, Temperature Sensor Signal amplifier, Processing circuit and LCD Display.

The Optics collected the infrared energy emitted by object and focus onto the Sensor. Then the sensor translates the energy into an electricity signal. This signal will be turned out to be digital shown on the LCD after the signal amplifier and processing circuit.

B. WARNING & CAUTIONS

1. Warning:

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

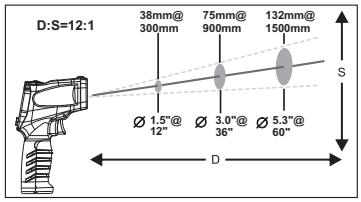
1). Do not point laser directly at eye or indirectly off reflective surfaces.
2). The unit cannot measure through transparent surfaces such as glass or plastic. It will measure the surface temperature of these materials instead.
3). Steam, dust, smoke, or other particles can prevent accurate measurement by obstructing by the units optics.

2. Cautions:

Infrared thermometer should be protected for the following:

1). EMF (electro-magnetic fields) from arc welders, induction heaters.
2). Thermal shock (cause 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



(Figure 1)

1. When take measurement, pay attention to the Distance to Spot Size. As the Distance (D) from the target surface increases, the spot size (S) of the area measured by theunit becomes larger.
   The Distance to Spot size of the unit is 12:1.(Figure 1)
2. Field of view:
   Make sure the target is larger than the unit's spot size.
   The smaller the target the closer measure distance.
   When accuracy is critical, make sure the target is at least twice as large as the spot size.

D. EMISSIVITY

Emissivity: Most organic materials and painted or oxidized surfaces have an emissivity of 0.95(preset in the unit). Inaccurate readings will result from measuring shiny or polished metal surfaces. To compensate for this, adjust the units emissivity reading or cover the surface to be measured with masking tape or flat black paint.

Measure the tape or painted surface when the tape or painted reach the same temperature as the material underneath.

Marterial	Emissivity	Marterial	Emissivity
Aluminum	0.30	Iron	0.70
Asbestos	0.95	Lead	0.50
Asphalt	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
Ceramic	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90
Copper	0.95	Skin	0.98
Dirt	0.94	Snow	0.90
Frozen food	0.90	Steel	0.80
Hot food	0.93	Textiles	0.94
Glass(plate)	0.85	Water	0.93
Ice	0.98	Wood	0.94

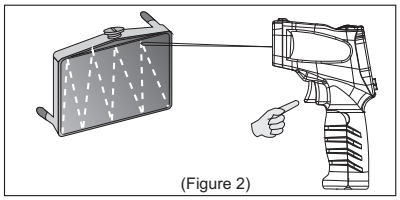
E. Operation

1. Operating the unit:

1). Open battery door and load two 1.5V AAA batteries.
2). Pull the trigger to turn on the unit.
3). Aim at the target surface and pull the trigger, then temperature will be shown on the LCD.
   This unit is equipped with a laser, which is only used for aiming.

2. Locating a Hot Spot:

To find a hot spot, aim the thermometer outside of interest, then scan across with an up and down motion until you locate the hot spot. (Figure 2).

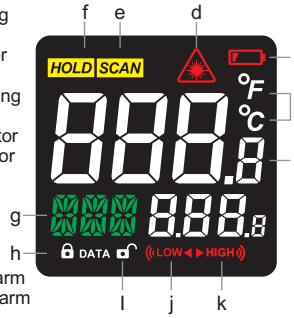


(Figure 2)

F. LCD display & buttons

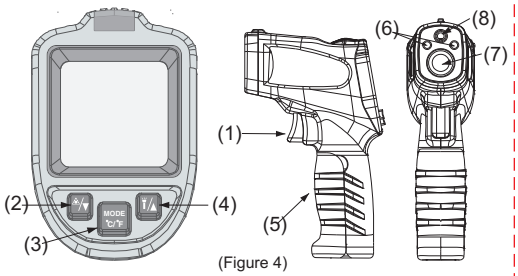
1. LCD: as shown in Figure 3.

a. Temperature reading
b. Temperature units
c. Low battery indicator
d. Turning on state indicator of positioning laser
e. Data reading indicator
f. Data holding indicator
g. Mode display
h. Trigger locking indicator
i. Trigger unlocking indicator
j. Low temperature alarm
k. High temperature alarm



(Figure 3)

2. Names and functions of parts: as shown in Figure 4



(Figure 4)

(1) Measurement switch (trigger).

Pull trigger to display temperature value, and "SCAN" appears on screen at the same time; when trigger is released, temperature reading is displayed, and data is automatically maintained. The instrument is automatically turned off after about 30 seconds of operation.

(2) Laser switch/Down button.

(3) MODE (mode switch button) / temperature unit switch button.

Press MODE button to cycle through the following modes, MAX→MIN→dIF→HAL→LAL→EMS→LOG. The instrument memorizes the current measurement mode, the next time the mode will be that of last time after startup.

a.MAX: Maximum value of the last measured data.
b.MIN: Minimum value of the last measured data.
c.dIF: Difference between maximum and minimum value.
d.HAL (High temperature alarm):
When HAL is selected, press up/down button to set high temperature alarm point. When the measured temperature is higher than setting point, high temperature alarm indicator appears and sound of "bi bi…" goes off.
e.LAL (Low temperature alarm):
When LAL is selected, press up/down button to set high temperature alarm point. When the measured temperature is lower than setting point, low temperature alarm indicator appears and sound of "bi bi…" goes off.
f.EMS (Emissivity):
When EMS is selected, press up/ down button to set value within 0.10 to 1.00.
g.LOG (Storage function):
After each measurement, the measured data is automatically recorded (LOG); a total of 100 groups can be recorded, the first group will be automatically covered if more than 100 groups, and so on. When LOG is selected, press up/down key to review the data measured before.

h. Temperature units switch:

Pull and hold trigger, then press temperature units switch button to switch units.

(4) UV light button / trigger locking button / Up button.

a. UV light:

Press this button to turn on/off UV light, which can be used for fluorescent leakage detection.

b. Trigger locking:

Pull and hold trigger, and press " " button until trigger locking indicator appears, then release trigger and button. At this time, thermometer

remains in temperature measurement state; pull and hold trigger again, and press " " button until trigger unlocking indicator appears, which indicates that temperature measurement state is over.

(5) Battery door
(6) UV light
(7) Infrared temperature sensing area
(8) Laser (assisted positioning)

G. Maintenence

1. Lens Cleaning:

Blow off loose particles using clean compressed air. Gently brush remaining debris away with a moist cotton swab. The swab may be moistened with water.

2. Case cleaning:

Clean the case with a damp sponge/cloth and mild soap.

Note:
1) Do not use solvent to clean plastic lens.
2) Do not submerge the unit in water.

H. Specification

LCD	Colorful LCD
Temperature measurement range	−50 ℃~ 650℃ (−58℉ ~ 1202℉)
Temperature display accuracy	0.1℃
Temperature measurement error	−50℃~0℃(−58℉~32℉):±3℃(±5℉) 0℃~650℃(32℉~1202℉):±1. 5% rdg or±1.5℃（±2.7℉）Take the bigger value
Repeatability	1% rdg or 1℃Take the bigger value
Reponse time	0. 5s, 95% Response
Emissivity	0.10~1.00 Adjustable(preset as 0.95)
D:S	12:1
Response wavelength	5um~14 um
Laser	Ring light spot
Flashlight	UV light
Working environment temperature	0 ℃~40℃ (32℉ ~ 104℉)
Relative working environment humidity	10% RH~90% RH withput condensation
Storage temperature	−10 ℃~ 60℃ (14℉~140℉)
Batteries	1. 5V AAAbattery*2(No.7 battery)
Low power indicator	Low power indicator for power below 2.4V
Overload indicator	"Hi"/"Lo" displayed on LCD
Weight/dimensions	202g(including batteries) /108*49*177 mm

Specific Declarations:
Our company shall hold no any responisibility resulting from using output from this product as an direct or indirect evidence.
We reserves the right to modify product design and specification without notice.