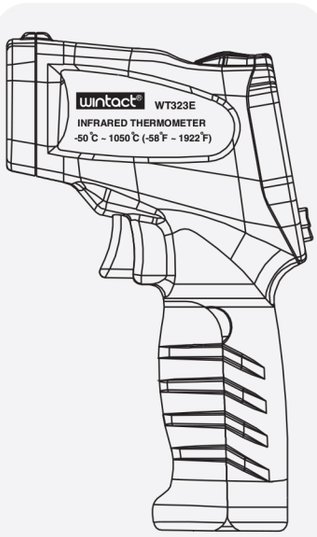
wintact®

MODEL: WT323E

Infrared thermometer
Instruction manual



Version：WT323E-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.

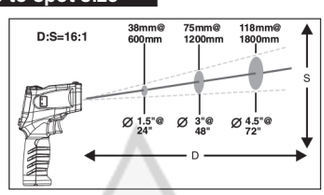
2. Cautions:

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 16:1.(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

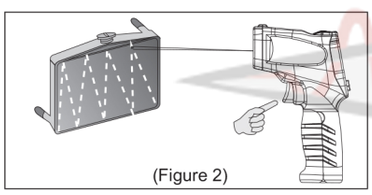
E. Operation

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).

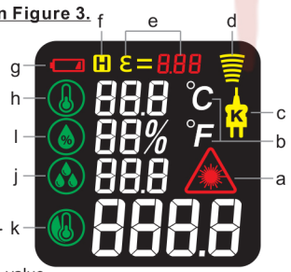


(Figure 2)

F. LCD display & buttons

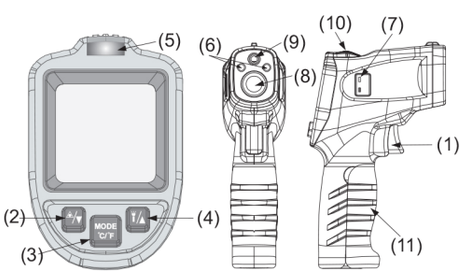
1. LCD: as shown in Figure 3.

a. Turning on state indicator of laser positioning
b. Temperature measurement units
c.K-type thermocouple
d. Data reading indicator
e. Emissivity
f. Data holding indicator
g. Low power indicator
h. Ambient temperature value
i. Ambient humidity value
j. Dew point temperature value
k. Surface temperature value (infrared temperature measurement)



(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 automatically shut down 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 four modes, MODE 1→MODE 2→MODE 3→MODE 4.

a. Mode 1: Mildew alarm mode.

Under this mode, the current ambient temperature, humidity, dew point temperature and surface temperature are displayed. Pull trigger to measure surface temperature.

Note: The instrument decides whether the measured object is easy to mildew according to the surface temperature of the measured object and the dew point temperature of the current environment. Indicator light turns green for normal state. If the measured object tend to mildew, the indicator light turns yellow; if already mildew, the indicator light turns red.

b. Mode 2: Temperature difference alarm mode.

Unde this mode, pull trigger to display the current ambient temperature and the surface temperature of the measured object. When the surface temperature of the measured object is close to ambient temperature, the indicator light turns green; if much higher than or lower than ambient temperature, the indicator light turns red. Otherwise, the indicator light turns yellow.

c. Mode 3: K-type thermocouple temperature measurement mode.

Under this mode, the temperature of the K-type thermocouple is measured and thermocouple icon is displayed. Before the measurement, insert K-type thermocouple probe into thermocouple socket. Pull and hold trigger, thermometer displays both surface temperature and K-type thermocouple temperature.

d. Mode 4: Emissivity setting mode.

Under this mode, press up/down button to to set emissivity within range of 0.10~1.00 by decreasing or increasing value.

e. Temperature units switch: Pul and hold trigger, then press this button to switch units.

(4) UV light button / Up button.

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

(5) Alarm light indicator
(6) UV light
(7) K-type thermocouple socket
(8) Infrared temperature sensing area
(9) Laser (assisted positioning)
(10) Temperature/humidity sensing area
(11) Battery door

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℃~1050℃ (−58℉~1922℉)
Temperature display accuracy	0.1℃
Temperature measurement error	−50℃~0℃(−58℉~32℉):±3℃ (±5℉) 0℃~1050℃(32℉~1922℉):±1. 5% rdg or±1.5℃(±2.7℉)Take the bigger value
K-type thermocouple measurement range	-40℃~500℃ (-40℉ ~ 932℉)
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	16:1
Response wavelength	8um~14 um
Laser	Ring light spot
Flashlight	UV light
Ambient temperature measurement range	-20℃~60℃ (-4℉ ~ 140℉)
Ambient temperature measurement accuracy	±1℃(2℉)
Relative humidity measurement accuracy	±5% RH
Dew point temperature measurement	-10℃~ 50℃(14℉~ 122℉): ±1.5℃/3℉
Operating Temperature	0℃~40℃ (32℉ ~ 104℉)
Operating Humidity	10% RH~90% RH non-condensable
Storage Temperature	-10℃~ 60℃ (14℉~140℉)
Batteries	1.5V AAA battery*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

Specifications of K-type thermocouple	
Measurement range	0℃~250℃ (300℃ for short time)
Measurement error	±2.5℃ or 0.75% rdg Take the bigger value
Thermal response time	＜10s

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.