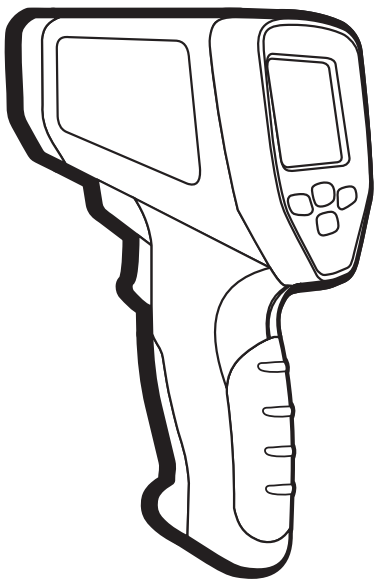# INKBIRD**PLUS**

INSTRUCTION MANUAL

INK-IFT03 GR / INK-IFT03 OR

INFRARED THERMOMETER

Specifications

Product category	Infrared Thermometer
Accuracy	≥100℃, ±2% / ≤100℃, ±2℃
Response time	0.5s
Emissivity	Adjustable , 0.1 to 1.0
Distance to spot ratio	16 : 1
℃/℉ Selection	√
Backlight display selection	√
Dual laser targeting	√
Function selection	High/Low temperature alarm setup MAX/MIN/AVG/DIF temperature measurement
Operating environment	Temperature: 0℃~50℃ Relative humidity: 10~95%RH
Storage temperature	-20~50℃ (-4~122℉)
Operating temperature	0~50℃ (32~122℉)
Power/Power life	9V / about 12 hours

Warning

Do not point laser directly or indirectly(through reflective surfaces) at someone's eye.

Operation Instructions

How to turn on the infrared thermometer?

Install batteries, then press the measurement button, the thermometer will be turned on automatically and displays the measured temperature.

How to turn off the infrared thermometer?

The thermometer will be turned off automatically 15 seconds later if no operation is performed on it.

How to measure an object with the infrared thermometer?

Aim the target, press the measure button to perform a single measurement, or hold the measure button to perform continuous measurement.

Note: Please hold the measure button for at least 0.5 seconds while measuring the temperature of an object.

Distance Spot Ratio

The farther the target is, the larger the measuring point (measurement area) of the thermometer is. The relationship between the distance and the measuring point is usually

expressed by the ratio of the distance to the measuring point, D:S.

The diameter of the target spot area is 3.0cm when you test from a distance of 36cm, and the thermometers will display the average temperature of the target spot area with a diameter of 3.0cm.
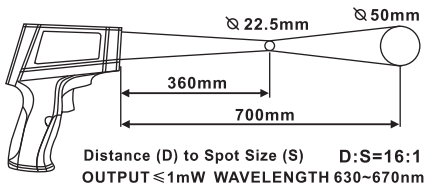

Distance (D) to Spot Size (S) D:S=16:1
OUTPUT ≤1mW WAVELENGTH 630~670nm

Diagram 1

Emissivity

Most organic materials, painted or oxidized surfaces have an emissivity of 0.95(preset in the unit). Inaccurate readings may result from measuring shiny or polished metal surfaces(for example,stainless steel or aluminium). To make better accuracy, cover the measured surface with masking tape or black paint. Measure the tape or painted surface when the tape or paint reaches the same temperature of the material underneath.
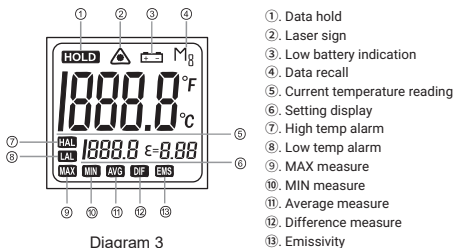
Please kindly note: Thermometer can not test the temperature of target objects through across the glass. And steam, dust, smog will lower the accuracy of testing.

Function Diagram
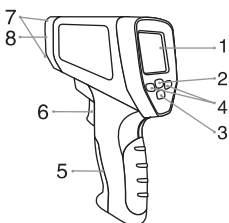
1. LCD
2. backlight
   laser/℃℉ button
3. Function button
4. up/down button
5. battery cover
6. measure key
7. laser hole
8. infrared lens

Diagram 2

① . Data hold
② . Laser sign
③ . Low battery indication
④ . Data recall
⑤ . Current temperature reading
⑥ . Setting display
⑦ . High temp alarm
⑧ . Low temp alarm
⑨ . MAX measure
⑩ . MIN measure
⑪ . Average measure
⑫ . Difference measure
⑬ . Emissivity

Diagram 3

1. Data Hold: To keep current reading.

2. Laser Sign: Test with laser.

3. Low battery indication: To remind users to change batteries.

4. Data recall: press the function key to display the first record, then press the function key again for 0.5 seconds each to display the second record and the third record.

5. Current temperature reading.

6. Mode setting: Press the mode button for 0.5 seconds to turn into different modes and display the related information.

7. High temp alarm: Turn on the alarm when the temperature reading is higher than the set temperature.

8. Low temp alarm: Turn on the alarm when the temperature reading is lower than the set temperature.

9. Max measure: Press or hold the measure button, the thermometer will display the maximum temperature reading.

10. Min measure: Press or hold the measure button, the thermometer will display the minimum temperature reading.

11. Average measure: Press or hold the measure button, the thermometer will display the average temperature reading.

12. Difference measure: Displays the difference between the maximum and the minimum reading.

13. Emissivity: Adjustable from 0.1 to 1.0 to suitable for testing of different articles.

Button function

● **Backlight/Laser button:** Press the backlight/laser button to switch between backlight and laser, and press the button and hold for a while to switch between ℃ and ℉.

● **Up/Down button:** Set and adjust the value.

● **Mode button:** Press the Mode button shortly to switch among different modes. If press the mode button for a while, then it turns into the mode of temperature records, and then press it shortly again and again, then it will show temperature records of the last 9 tests one by one.

Cautions

Infrared thermometer should be protected in the following:
– EMF (electro-magnetic fields) from arc welders, induction heaters.
– Thermal shock (caused by large or abrupt ambient temperature changes, please wait 20 to 30 minutes for the thermometer to reach a stable state before use).
– Do not leave the unit on or near objects of high temperature.

Maintenance

1. Lens cleaning: Use the clean compressed air to blow off loose particles, use the soft brush to remove the debris away, at last clean it with wet cotton cloth.
2. Case cleaning: Clean the case with a damp sponge/cloth and mild soap.

NOTE

1. Do not use solvent to clean the lens.
2. Do not submerge the unit in water.

Emissivity Of Articles					
Material	**Feature**	**Emissivity**	**Material**	**Feature**	**Emissivity**
Aluminium	Oxidized	0.20–0.40	Human skin		0.98
	Polished	0.02–0.04	Graphite	Oxidized	0.20–0.60
Brass	Oxidized	0.40–0.80	Plastic	Transparency >0.5mm	0.95
	Polished	0.02–0.05	Rubber		0.95
Gold		0.01–0.10	Plastic cement		0.85–0.95
Iron	Oxidized	0.60–0.90	Concrete		0.95
Steel	Oxidized	0.70–0.90	Cement		0.96
Asbestos		0.95	Soil		0.90–0.98
Plaster		0.80–0.90	Mortar		0.89–0.91
Asphalt		0.95	Brick		0.90–0.96
Rock		0.70	Marble		0.94
Wood		0.90–0.95	Textile	All kinds	0.90
Charcoal	powdered	0.96	Paper	With color	0.95
Carbon		0.85	Sand		0.90
Lacquerwork	lackluster	0.97	Clay		0.92–0.96
Carbon Cement		0.90	Gravel	Tableware	0.95
Soap Bubble		0.75–0.80	Glass		0.85–0.92
Water		0.93	Textile		0.95
Snow		0.83–0.90	Heated food		0.95
Ice		0.96–0.98	Plastic		0.95
Frozen Foods		0.95	Oil		0.94
Ceramics		0.95	Steel and iron		0.80
Limestone		0.98	Wool	Natural	0.94
Paint		0.93	Lead	Oxidized	0.50

FC CE FDA ♻ RoHS 🗑