

# Clarke®



## INFRARED THERMOMETER

MODEL NO: IRT2

PART NO: 4501011

## OPERATION & MAINTENANCE INSTRUCTIONS

UK  
CA | CE



ORIGINAL INSTRUCTIONS

DL1023

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## **INTRODUCTION**

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Thank you for purchasing this CLARKE Infrared Thermometer.

Please read this instruction leaflet thoroughly and follow the instructions carefully, to ensure that the instrument will give you long and satisfactory service.

Please keep these instructions in a safe place for future reference.

This infrared thermometer can be used for measuring the temperature of an objects surface, which is applicable for various hot, hazardous or hard to reach objects without contact.

This unit consists of optics, temperature sensor, laser guide, signal amplifier, processing circuit and LCD display. The optics collect the infrared energy emitted by an object and focuses it onto the sensor. Then the sensor translates the energy into an electrical signal and temperature display.

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## **GUARANTEE**

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This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which is was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

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## WARNINGS & CAUTIONS

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### WARNING:

- This thermometer should **NOT** be used as a medical thermometer.
- Before you use this unit, check on the housing carefully. If there is any damage, **DO NOT** use it.
- **DO NOT** point the laser directly at eyes or indirectly off reflective surfaces.
- **DO NOT** use this unit in the environment of explosive gas, steam or dust.

### CAUTION:



To avoid damage to the unit or the target, please protect from the following situations:

- EMF (Electro-Magnetic Field) from arc welders, induction heaters, etc.
- Thermal shock (caused by large or abrupt ambient temperature changes), allow 30 minutes for the unit to stabilise before use.
- **DO NOT** leave the unit on or near objects of high temperature.

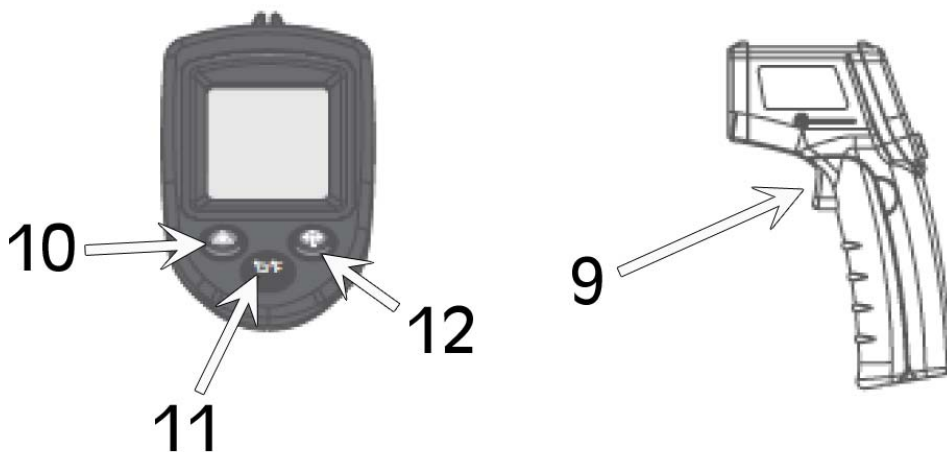
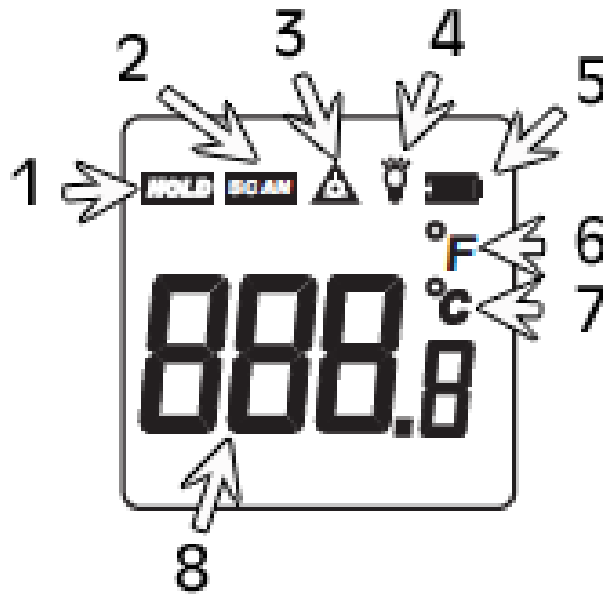
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## SAFETY SYMBOLS

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	Read this instruction booklet carefully before use.
	Warning: Laser Beam

## LCD DISPLAY AND BUTTONS



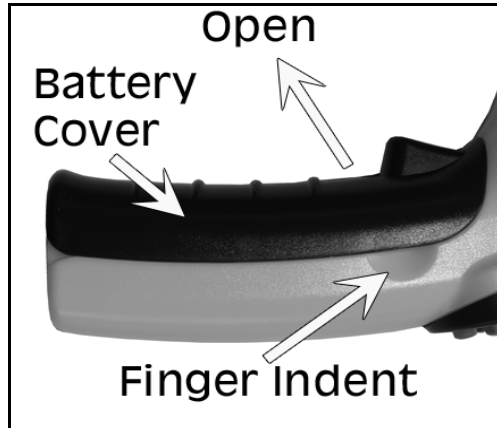
1	Data Hold Icon	7	Celsius Unit
2	Scanning Icon	8	Temperature Reading
3	Laser On Icon	9	Trigger
4	Backlight On Icon	10	Laser On/Off Button
5	Low Battery Icon	11	Celsius/Fahrenheit Switch Button
6	Fahrenheit Unit	12	Backlight On/Off Button

## OPERATION

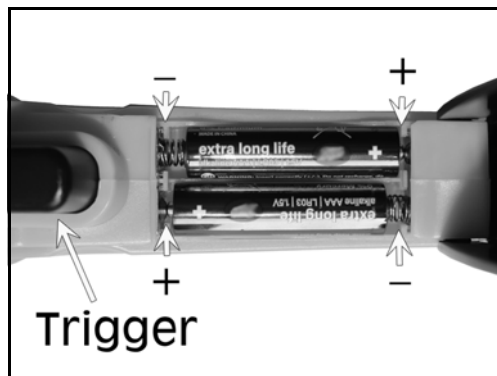
### BATTERY INSTALLATION/REPLACEMENT

This unit requires 2 x 1.5V, AAA batteries. To install/replace the batteries, carry out the following:

1. Open the battery cover by placing your thumb and index finger in the finger indents on the handle and pulling the cover open.



2. Place 2 x AAA size batteries in the battery compartment as shown.
3. Close the cover.



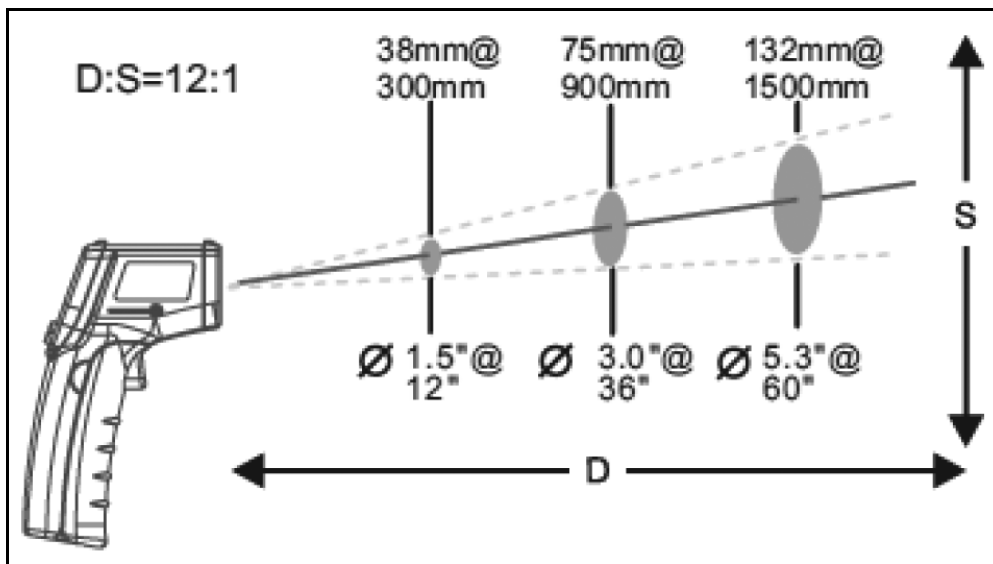
### OPERATION

1. Pull the trigger to turn on the unit.
2. Press the Backlight On/Off button and/or the Laser On/Off button if required. An icon will display on the screen when either of them has been switched on.
3. Press the Celsius/Fahrenheit Switch Button to choose which unit of measurement is required.
4. Aim at the required target and press the trigger. If the laser has been switched on, a red laser dot will appear on the target. This laser is **ONLY** used for aiming the sensor.
5. If the trigger is pressed and held, the unit will continually scan the target and the SCAN icon will appear on the screen.

6. Release the trigger and the screen will show the HOLD icon and the last scanned temperature will show for 7 seconds.
7. This unit has a built-in 7 second auto power off function.

### **DISTANCE TO SPOT SIZE**

1. When taking a 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 the unit becomes larger. The Distance to Spot Size of this unit is 12:1.
2. Make sure the target is larger than the units spot size. The smaller the target, the closer the measure distance will need to be. When accuracy is critical, make sure the target is at least twice as large as the spot size.

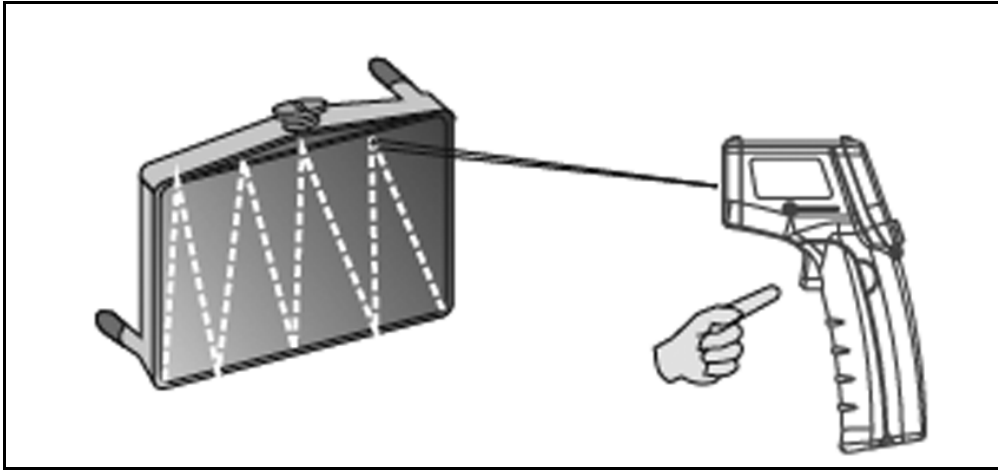


### **EMISSIVITY**

Most organic materials and painted or oxidised surfaces have an emissivity of 0.95 (pre-set in the unit). Inaccurate readings will result from measuring shiny or polished metal surfaces. To compensate, cover the target surface with masking tape or flat black paint. Measure the tape or painted surface when the tape or paint reach the same temperature as the material underneath.

## LOCATING A HOT SPOT

To locate a hot spot, aim the unit outside of the interested area, keeping the trigger depressed, then scan across with an up and down motion until you locate the hot spot, as shown.



## MAINTENANCE

1. Lens Cleaning: Blow off any loose particles using clean compressed air (**ALWAYS** use eye protection when using compressed air). Gently brush remaining debris away with a moist cotton swab. The swab can be moistened with water.
2. Case Cleaning: Clean the case with a damp sponge/cloth and mild soap.
3. **DO NOT** use solvents to clean the lens or casing.
4. **DO NOT** submerge the unit in water.

## PRODUCT SPECIFICATIONS

Model	<b>IRT2</b>
Temperature Range	-50~400°C (-58~752°F)
Accuracy	-50~0°C (-58~32°F): +/- 3°C (5°F) 0~400°C (32~752°F): +/- 1.5°C (2.7°F)
Resolution	0.1°C or 0.1°F
Repeatability	1% of Reading or 1°C
Response Time	500 mSec, 95% Response
Spectral Response	5~14 um
Emissivity	0.95 Preset
Distance to Spot Size	12:1
Operating Temperature	0~40°C (32~104°F)
Operating Humidity	10~90%RH Non-condensing up to 30°C (86°F)
Storage Temperature	-20~60°C (-4~140°F)
Typical Battery Life	Laser Off: 12 Hours
Dimensions (L x W x D)	154 x 36 x 83mm
Weight	102g

The details and specifications contained herein, are correct at the time of going to print. However, CLARKE International reserve the right to change specifications at any time without prior notice.



# DECLARATION OF CONFORMITY - UKCA



**Clarke**<sup>®</sup>  
**INTERNATIONAL**

Hemnall Street, Epping, Essex, CM16 4LG

## DECLARATION OF CONFORMITY

**This is an important document and should be retained.**

**We hereby declare that this product(s) complies with the following legislation:**

*The Electromagnetic Compatibility Regulations 2016*

*The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012*

**The following standards have been applied to the product(s):**

*EN IEC 61000-6-1:2019, EN IEC 61000-6-3:2021, IEC 62321-3-1:2013,*

*IEC 62321-4:2013/AMD1:2017, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015,*

*IEC 62321-7-2:2017, IEC 62321-8:2017*

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

**The UKCA mark was first applied in: 2023**

**Product Description:** Infrared Thermometer  
**Model Number(s):** IRT2  
**Serial/Batch Number:** Refer to product/packaging label  
**Date of Issue:** 08/09/2023

**Signed:**

J.A Clarke

Director

# DECLARATION OF CONFORMITY - CE



**Clarke**<sup>®</sup>  
**INTERNATIONAL**

Fitzwilliam Hall, Fitzwilliam Place, Dublin 2

## DECLARATION OF CONFORMITY

**This is an important document and should be retained.**

We hereby declare that this product(s) complies with the following legislation:

2014/30/EU                      *Electromagnetic Compatibility Directive*  
2011/65/EU                      *Restriction of Hazardous Substances (RoHS) Directive*

The following standards have been applied to the product(s):

EN IEC 61000-6-1:2019, EN IEC 61000-6-3:2021, IEC 62321-3-1:2013,  
IEC 62321-4:2013/AMD1:2017, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015,  
IEC 62321-7-2:2017, IEC 62321-8:2017

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

**The CE mark was first applied in: 2023**

**Product Description:**                      Infrared Thermometer  
**Model Number(s):**                          IRT2  
**Serial/Batch Number:**                      Refer to product/packaging label  
**Date of Issue:**                                08/09/2023

**Signed:**

J.A Clarke  
Director



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