

# KIRAY 50

## Infrared thermometer

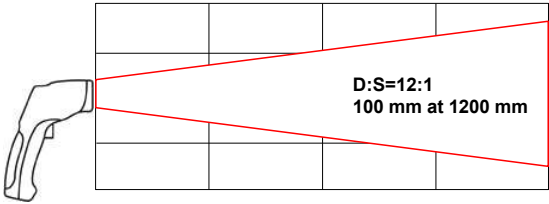
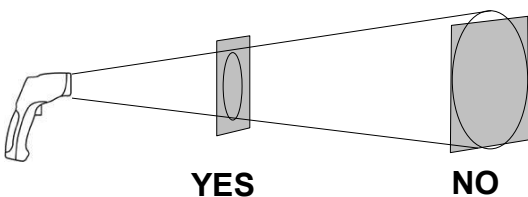
**New**  
**CE**



Infrared thermometer **KIRAY 50** is a key tool to diagnose, inspect and check any temperature, with the advantage of using “no-contact” technology. You can safely measure surface temperatures of hot objects, dangerous or difficult to access. Perfect tool to take temperature in a house, a garage, a workshop, an office, a car, a kitchen etc...

### Distance from the target

<b>Distance</b>	300	600	1200	mm
<b>Diameter</b>	25	50	100	mm

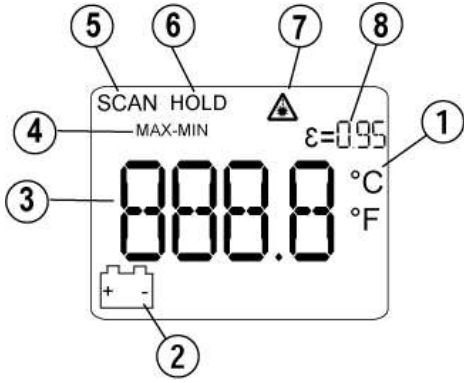
Make sure that the target is larger than the size of the laser sighting.

### Technical features

<b>Spectral response</b> .....	6 - 14 $\mu$ m
<b>Optical</b> .....	D.S : 12:1 (100 mm at 1200 mm)
<b>Temperature range</b> .....	From -50 to +380°C
<b>Accuracy*</b> .....	From -50 to -20°C : $\pm 5^\circ$ C From -20 to +380°C : $\pm 2\%$ of reading or $\pm 2^\circ$ C
<b>Display resolution</b> .....	0.1°C
<b>Response time</b> .....	less than 1 second
<b>Emissivity</b> .....	0.95 (fixed value)
<b>Over range indication</b> .....	LCD will show : « HI » / « Lo »
<b>Laser sighting</b> .....	Wave length : from 630 nm to 670 nm Output < at 1mW, Class 2 (II)
<b>Indication of positive or negative temperature</b> .....	Automatic (no indication for a positive temperature) (-) sign for a negative temperature
<b>Screen</b> .....	4 digits with LCD backlighted screen
<b>Auto-extinction</b> .....	Automatic after 10 seconds of inactivity
<b>Power supply</b> .....	Alkaline 9V battery
<b>Autonomy</b> .....	100 h (inactive laser and backlight) 30 h (active laser and backlight)
<b>Use temperature</b> .....	From 0 to +10°C for a short period From +11 to +50 °C for a long period
<b>Storage temperature</b> .....	From -20°C to +60°C
<b>Relative humidity</b> .....	From 10 to 90%RH in operating mode and lower than 80%RH in storage
<b>Dimensions</b> .....	155 x 82 x 43 mm
<b>Weight</b> .....	170 g (included battery)

\*Accuracy for an ambient temperature from 18 to 28°C (with a relative humidity lower than 80% RH)

## Display



- 1 - Technical unit °C/°F
- 2 - Low battery indicator
- 3 - Temperature value
- 4 - MAX/MIN value indicator
- 5 - Current measurement indicator
- 6 - HOLD indicator (fixed measurement)
- 7 - Laser in operation indicator
- 8 - Emissivity value = 0.95 (fixed value)

## KIRAY 50 instrument buttons



- 1 - **MAX/MIN button** : It allows to display maximum and minimum values during a measurement.
- 2 - **Backlight button** : It allows to activate or deactivate LCD backlight.
- 3 - **Laser button** : It allows to activate or deactivate the laser.
- 4 - **Technical unit button** : It allows to choose measurement unit : °C or °F.
- 5 - **Trigger** : it allows to measure temperatures.  
Press the trigger : « scan » is indicated on the top left of the screen. Release it, « hold » is indicated on the top left of the screen and the last measurement is displayed. Device automatically shut off after 10 seconds of inactivity.

## CE certification

This device meets with following standards' requirements: EN 50081-1 : 1992, Electromagnetic compatibility, Part 1

- EN 50081-1 : 1992, Electromagnetic compatibility, Part 1
- EN 50082-1 : 1992, Electromagnetic compatibility, Part 2

## Description



## Accessories

- Case holster with passer-by belt
- User manual

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## ■ Important information

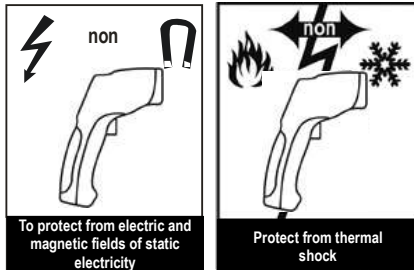
For correct measurements :

- Do not take any measurement on metal or shiny or reflective surfaces.
- Do not measure through transparent surfaces such as glass, for example.
- Water vapor, dust, smoke, etc ... may prevent correct measurements because they obstruct the optical of the instrument.
- Make sure that the target is larger than the size of the laser sighting.

To avoid any inconvenience :

- Do not aim directly or indirectly (reflection on reflective surfaces) the laser in the eyes.
- Change the batteries when the indicator blinks.
- Do not use the thermometer around explosive gas, vapor or dust
- Do not leave the device with the lock on (lock at the top right of the screen) because in this configuration, the instrument does not turn off automatically.

To prevent damage on your instrument or equipment please carefully respect these conditions :



## ■ Maintenance

To install or change the 9V battery, open the part near the trigger and put it in the battery compartment.

## ■ Emissivity

Emissivity is a term used to describe the energy-emitting characteristics of materials.

Most (90% of typical applications) organic materials and painted or oxidized 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 surface to be measured with masking tape or flat black paint. Allow time for the tape to reach the same temperature as the material underneath it. Measure the temperature of the tape or painted surface.

See table below for values of emissivity of specific materials :

Aluminium	0.30	Ice	0.98
Asbestos	0.95	Iron	0.70
Asphalt	0.95	Lead	0.50
Basalt	0.70	Limestone	0.98
Brass	0.50	Oil	0.94
Brick	0.90	Paint	0.93
Carbon	0.85	Paper	0.95
Ceramic	0.95	Plastic	0.95
Concrete	0.95	Rubber	0.95
Copper	0.95	Sand	0.90
Dirt	0.94	Skin	0.98
Frozen food	0.90	Snow	0.90
Hot food	0.93	Steel	0.80
Glass	0.85	Textile	0.94
Water	0.93	Wood	0.94

## Infrared thermometer, how does it works?

Infrared thermometers can measure the surface temperature of an object. Its optic lens catches the energy emitted and reflected by the object. This energy is collected and focused onto a detector. This information is displayed as temperature. The laser pointer is only used to aim at the target.

