USER MANUAL

INFRARED THERMOMETER

PCE-IR 810L

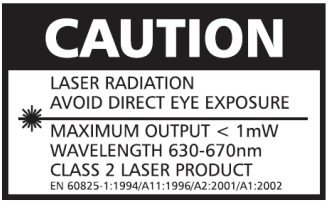
ENGLISH



User manuals in various languages (français, italiano, español, português, nederlands, türk, polski) can be found via our product search on:
www.pce-instruments.com

SAFETY

- Use extreme caution when the laser beam is turned on.
- Do not let the beam enter your eye, another person's eye or the eye of an animal.
- Be careful no to let the beam on a reflective surface strike your eye.
- Do not allow the laser light beam impinge on any gas which can explode.

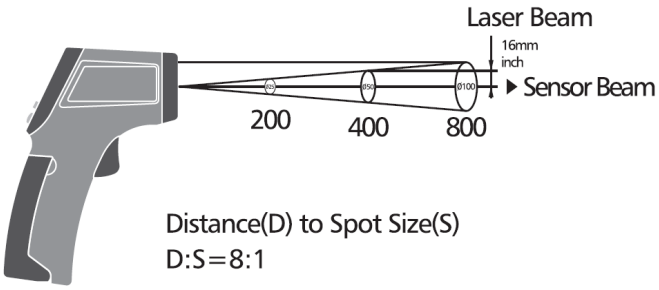


FEATURES

- Precise non-contact measurements
- Built-in laser pointer
- User selectable °C or °F
- MAX/MIN temperature displays
- Automatic Data Hold & Auto power off
- Automatic selection range and Display Resolution 0.1°C (0.1°F)
- The meter at 8 inches away measure 1 inch target
- Backlit LCD display

Wide range application
Food preparation, Safety and Fire inspectors, Plastic molding, Asphalt, Marine and screen printing, measure ink and dryer temperature, Diesel and Fleet maintenance.

Field of View
The InfraRed Thermometer's field of view is 8:1, meaning that if the Infrared Thermometer is 8 inches from the target, the diameter of the object under test must be at least 1 inch. Other distances are shown below in the field of view diagram. Refer to the chart printed on the meter for more information.



SPECIFICATIONS

General Specifications	
Measuring Ranges	-50°C ... 550°C / -58°F ... 1022°F
Response Time	> 1 sec
Over Range Indication	LCD will show ------
Polarity	Automatic (no indication for positive polarity); Minus(-) sign for negative polarity.
Emissivity	0.95 fixed value
Field of View	D/S = Approx. 8:1 ratio (D=distance,S=spot) (Has 90% encircled energy at the focal point)
Diode Laser	Output < 1mW, Wavelength 630 ... 670nm, Class 2 (II) Laser product
Spectral Response	6 ... 14µm
Power Off	Automatic shut off after 8 seconds, approx.
Operating Temperature	0°C ... 50°C / 32°F ... 122°F
Storage Temperature	-20°C ... 60°C / -4°F ... 140°F
Relative Humidity	10% ... 90%RH operating, <80%RH storage
Power Supply	9V battery, NEDA 1604A or IEC 6LR61, or equivalent
Weight	180g
Size	82 x 41.5 x 160mm

Infrared Thermometer		
Range	**Resolution**	**Accuracy**
-50°C ... 0°C (-58°F ... 32°F)	0.1°C/°F	±4°C/±7°F;
0°C ... 550°C (32°F ... 1022°F)		±2% of reading or ±2°C / ±4°F

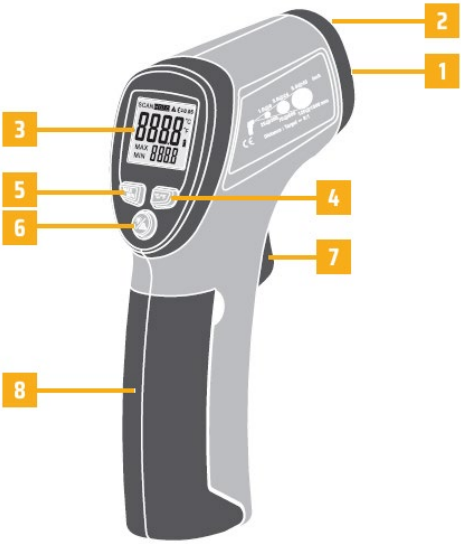
Note: Accuracy is given at 18°C to 28°C (64°C to 82°C), less than 80%RH.

Emissivity: 0.95 fixed value

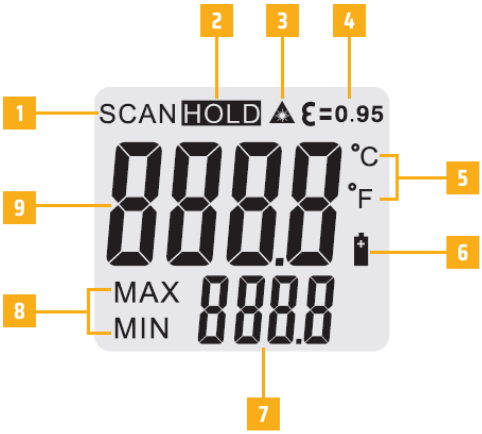
Field of View: Make sure that the target is larger than the unit's spot size. The smaller the target, the doser you should be to it. When accuracy is critical, make sure the target is at least twice as large as the spot size.

DEVICE DESCRIPTION

Front Panel Description
1 - IR sensor
2 - Laser pointer beam
3 - LCD Display
4 - °C / °F select key
5 - Max/Min select key
6 - Laser & Backlight select key
7 - Measurement Trigger
8 - Battery Cover



Indicator
1 - Measuring indication
2 - Data Hold
3 - Laser Point
4 - Fixed emissivity (0.95) scan Symbol
5 - Temperature °C / °F
6 - LOW battery indicator
7 - MAX/MIN readout
8 - MAX/MIN Symbol
9 - Digital readout



MEASURMENT OPERATION

- Hold the meter by its Handle Grip and point it toward the surface to be measured.
- Pull and hold the Trigger to turn the meter on and begin testing. The display will light if the battery is good. Replace the battery if the display does not light.
- While measuring, the SCAN display icon will appear in the upper left hand corner of the LCD.
- While continuing to pull the Trigger: Short press switch Backlight, long press switch Laser.
- Release the Trigger and the HOLD display icon will appear on the LCD indicating that the reading is being held.
- The meter will automatically power off on approximately 8 seconds after the trigger is released.

Measurement Considerations
Holding the meter by its handle, point the IR Sensor toward the object whose temperature is to be measured. The meter automatically compensates for temperature deviations from ambient temperature. Keep in mind that it will take up to 30 minutes to adjust to wide ambient temperatures are to be measured followed by high temperature measurements, some time (several minutes) is required after the low (and before the high) temperature measurements are made.
This is a result of the cooling process which must take place for the IR sensor.

BATTERY REPLACEMENT

- As battery power is not sufficient, LCD will display the battery low symbol, replacement with one new battery type 9V is required.
- Open battery cover, then take out the battery from instrument and replace with a new 9-Volt battery and place the battery cover back.

NOTES

How it Works
Infrared thermometers measure the surface temperature of an object. The unit's optics sense emitted , reflected, and transmitted energy, which is collected and focused onto a detector. The unit's electronics translate the information into a temperature reading which is display on the unit. In units with a laser, the laser is used for aiming purposes only.

Field of View
Make sure that the target is larger than the unit's spot size. The smaller the target, the doser you should be to it. When accuracy is critical, make sure the target is at least twice as large as the spot size.

Distance & Spot Size
As the distance (D) from the object increases, the spot size (S) of the area measured by the unit becomes larger.

Locating a hot Spot
To find a hot spot aim the thermometer outside the area of interest, then scan across with an up and down motion until you locate hot spot.

Reminders
- » Not recommended for use in measuring shiny or polished metal surfaces (stainless steel, aluminum, etc.).
- » The unit cannot measure through transparent surfaces such as glass. It will measure the surface temperature of the glass instead.
- » Steam, dust, smoke, etc., can prevent accurate measurement by obstructing the unit's optics.

DISPOSAL

For the disposal of batteries in the EU, the (EU) 2023/1542 directive of the European Parliament applies. Due to the contained pollutants, batteries must not be disposed of as household waste. They must be given to collection points designed for that purpose. In order to comply with the EU directive 2012/19/EU we take our devices back. We either re-use them or give them to a recycling company which disposes of the devices in line with law. For countries outside the EU, batteries and devices should be disposed of in accordance with your local waste regulations. If you have any questions, please contact PCE Instruments.

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