

ETI LEARNING CENTRE

Infrared FAQ's

thermometer.co.uk/faqs#infraredfaq

Emissivity Table

thermometer.co.uk/img/documents/emissivity_table.pdf

Blog Pages

temperature.co.uk/category/infrared/

For guarantee, service, and technical assistance, please contact our technical sales office on 01903 202151 or email technical@etiltd.co.uk



Infrared Best Practice Guide



Electronic Temperature Instruments Ltd
Worthing · West Sussex · BN14 8HQ
01903 202151 · sales@etiltd.com · etiltd.com

etiltd.com

INFRARED MEASUREMENTS

Infrared thermometers are ideal for taking surface temperature measurements **ONLY** without contact. They provide relatively accurate temperatures without ever having to touch the object you're measuring. This is useful when a surface is just out of reach and a surface probe will not do the job.

HOW TO GET ACCURATE READINGS?

- Try to get as close as you can to the object being measured and always make sure you are perpendicular to the surface being measured.
- Take into account the emissivity value of the surface being measured.
- Keep the lens clean and clear of debris.
- Ensure the batteries are not low.
- Let the thermometer acclimatise to the ambient temperature.
- The best results can be achieved if the surface is matte black.
- Use a protective silicone boot with your instrument.
- Remember, the laser pointer (if present) is not measuring the temperature, just helping you correctly aim.
- Regular accuracy checks with either a comparator at ambient temperature, an ice bath at 0 °C or IR-500 Calibrator, used alongside a certified reference thermometer.
- Send your thermometer to a Calibration House for testing and certification.
- Only use medically accredited devices to take a person's temperature, not a catering or industrial infrared thermometer.



USING YOUR INFRARED THERMOMETER IN A COLD OR HOT ENVIRONMENT

Allowing your instrument to acclimatise for up to 30 minutes to the ambient temperature of the room will improve the readings, as an instrument taken from a warm room to a cold storage unit can show incorrect readings.

It will also prevent a rapid build-up of condensation or ice crystals which can form on the infrared sensor.

If you are measuring the temperatures of objects in a cold storage unit, or freezer, we recommend leaving the instrument in this area for up to 30 minutes so you can achieve the best temperatures. This potentially means using more than 1 infrared instrument if you have other applications.

CLEANING & CARING FOR YOUR INFRARED

To achieve accurate readings, infrared thermometers need to be kept free of dirt, dust, moisture, fog, smoke and debris. If these conditions are present, you may want to consider using another tool for measuring surface temperatures such as a surface temperature probe or other non-infrared thermometer.

Always store your thermometer in a dry, cool place, and ensure you protect your infrared thermometer from drops or knocks.

Never submerge any part of your infrared thermometer.

You should also plan regular inspections of your IR thermometers. Particular care should be taken to keep the infrared lens or opening free of dirt and debris.

To clean your infrared thermometer:

- Carefully wipe the opening and then the body of the thermometer.
- Because the IR lens is very delicate, only as a last resort should the lens be cleaned. With extreme care, use a very soft cloth or cotton swab with water - never use soap or chemicals.
- Allow the lens to dry fully before using the thermometer.