

Infrared Thermometers

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Measuring & Inspection



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An infrared thermometer measures surface temperature from a distance by detecting infrared radiation, giving instant non-contact readings on machines, motors, heaters, electronics and food. It is the fastest way to spot overheating, check bearing temperatures and demonstrate heat transfer.

Key Features

- Measurement ranges -50 to 550 degrees C typical
- Distance-to-spot ratios 8:1 to 12:1
- Laser aiming pointers
- Emissivity settings for material accuracy
- MAX/MIN and alarm modes

Typical Uses in the Workshop

- Check motor and bearing temperatures quickly
- Find overheating electronics and components
- Verify heater and oven surface temperatures
- Scan panels and pipes for hot or cold spots

Safe Operation

1. Set the emissivity for the surface material
2. Aim the laser spot at the target area
3. Hold steady at the rated distance ratio
4. Read the temperature and record it
5. Repeat at several points to find hot spots

SAFETY NOTES

- Never point the laser at eyes
- Do not rely on it for precise medical or food safety readings
- Do not use on shiny reflective surfaces without tape or paint
- Avoid measuring through glass or steam
- Store away from heat and direct sun

Maintenance & Consumables

- Wipe the lens clean with a soft cloth
- Replace the batteries when the display dims
- Check readings against a known reference yearly
- Protect from drops in its pouch
- Keep the lens cap on when stored

Specification & Buying Notes

A model with adjustable emissivity, a 12:1 ratio and MAX mode covers school diagnostics. A laser pointer and a good case are must-haves. Consider a probe input version for contact readings too.