

## New, Simple, Accurate, Inexpensive way to check your Infrared Thermometer

1. Low Cost
2. Re-useable
3. Accurate
4. Magnetic backing for use on Steel structures and parts.
5. Quick cost effective way to verify the accuracy and emissivity setting of your IR Thermometers.
6. Size 6.75" X 5.25"

*Emissivity* is the ratio of radiation emitted by a surface to the radiation emitted by a perfect black body at the same temperature. It is also described as an object's ability to emit or absorb infrared radiation. A perfect black body neither reflects nor transmits energy and has an emissivity of 1.0.

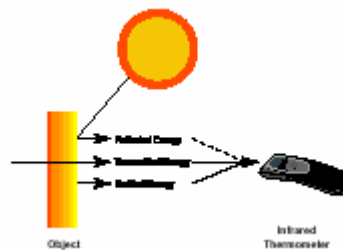


### What is Infrared Temperature Measurement?

The infrared spectral range is an invisible portion of the electromagnetic spectrum extending from 0.7 to 1000 microns. Any object warmer than absolute zero (0 Kelvin) emits energy somewhere within this range. Infrared energy is also transmitted through objects from another source and reflected off the surface of an object.

Infrared thermometers are available with fixed and adjustable emissivity. Most organic materials and painted or oxidized surfaces have an emissivity of 0.95; thus most units with fixed emissivity are preset at 0.95. Please see the following table for common emissivities.

Material	Emissivity
Asphalt	0.93 to 0.95
Ceramics and brick	0.80 to 0.95
Cloth	0.95
Concrete	0.94 to 0.95
Glass	0.76 to 0.85
Metals, unoxidized	0.02 to 0.21
Painted surfaces	0.74 to 0.96
Paper	0.50 to 0.95
Rubber	0.95
Sand	0.90
Snow	0.82 to 0.89
Soil	0.90 to 0.98
Steel, iron, oxidized	0.65 to 0.95
Steel, stainless	0.10 to 0.80
Water	0.93
Wood	0.89 to 0.94



Infrared thermometers sense emitted, reflected, and transmitted energy from an object and translate this information into a temperature reading. In essence, energy passes through the unit's optical system and is converted to an electrical signal at the detector. The signal is then displayed or converted to a standard output (°F or °C).

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