Infrared Thermometers

DIT-500 / 130

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LASER POINTER

DIT-500

DIT-130

DIT series Infrared Thermometers: easy way to quick and accurate temperature measurements

Professional and compact infrared (IR) thermometers are a solution for problems in every area where specific thermal conditions are required. The intuitive one-hand operation of the devices and the ergonomically designed gun-type housing allow for trouble-free daily work.

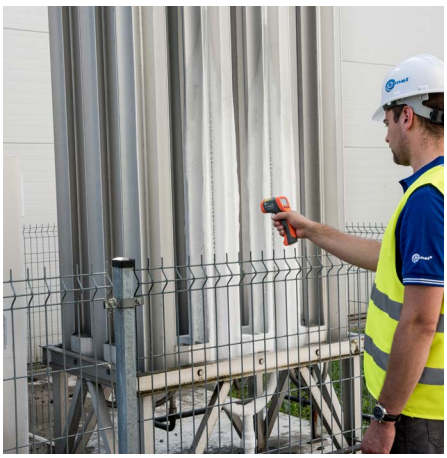
Product features

- precise non-contact temperature measurement
- type K temperature measurement
- ergonomic gun-type housing
- resolution 0.1°F (0.1°C)
- emissivity digitally adjustable from 0.10 to 1.00
- °C/°F switch
- automatic range selection
- high and low alarm
- DATA HOLD function for holding measured values
- temperature display maximum, minimum, average and difference
- trigger lock
- AUTO-OFF function
- backlit LCD

HVACR areas

Electrical areas

Mechanical areas



Industry areas

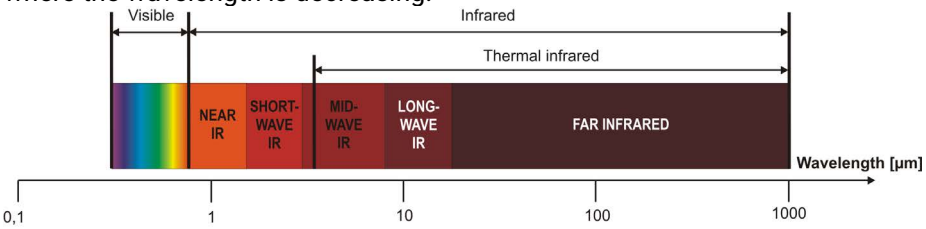
Holster included (DIT-130 only)

Infrared measurements

Temperature meters operating in the infrared are used to determine the temperature of the surface of the item. The optical system of the device detects the emitted, reflected and sent energy, which is collected and concentrated on the detector. Electronic system converts optical data into temperature value. In order to increase precision of the measurement the laser pointer is built in the device.

Infrared radiation

It is electromagnetic radiation whose wavelength is in the range of 780 nm - 1 mm. It is emitted by any material whose temperature is greater than 0 K. Is caused by the movement of electrons inside the atoms of a given material. Infrared radiation emission increases with increasing temperature, where the wavelength is decreasing.

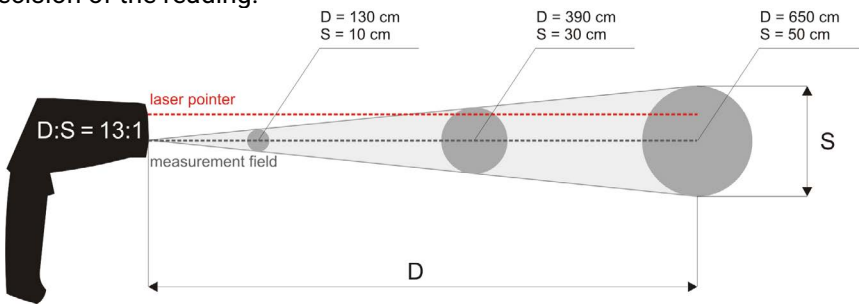


Emissivity

It is a parameter that determines the ability of a material to radiate heat. It takes values in the range 0 to 1, where the value of 1 corresponds to the emissivity of the black body and value 0 is the emissivity of the white body. Each material has its own emissivity coefficient depending on the type of material, surface roughness, direction of observation, wavelength and temperature.

D:S ratio

D:S (distance to spot) ratio is the size of the area being evaluated by the IR thermometer as it relates to distance. In other words, the area being measured becomes larger as the distance increases. The smaller the target, the closer you should be to it. This ratio will have a significant impact on the accuracy or precision of the reading.



Special features - DIT-500

- rapid reaction to temperature changes (below 150 ms)
- double laser sight (determination of the measurement area)
- data memory (LOG) for 100 measurements
- transmission of current readings to computer via USB cable
- backlit display for easy readings even in dark areas
- Hi and Lo alarms for signalling exceeding the set limits of the measuring range

Special features - DIT-130

- data memory (LOG) for 20 measurements
- Hi and Lo alarms for signalling exceeding the set limits of the measuring range
- a specially designed holster for storing the equipment with the possibility of attaching it to the belt in standard
- backlit display for easy readings even in dark areas

Infrared temperature range - DIT-500

Infrared temperature range	D:S	Resolution	Accuracy	
-50.0...+999.9°C -58.0...999.9°F	50:1	0.1°C 0.1°F	-50...+20°C -58...+68°F	±2.5°C ±4.5°F
1000...1600°C 1000...2912°F		1°C 1°F	20...400°C 68...752°F	±(1.0% m.v. + 1°C) ±(1.0% m.v. + 1.8°F)
			400...800°C 752...1472°F	±(1.5% m.v. + 2°C) ±(1.5% m.v. + 3.6°F)
			800...1600°C 1472...2912°F	±2.5% m.v.

Infrared temperature range - DIT-130

Infrared temperature range	D:S	Resolution	Accuracy	
-32.0...+380.0°C -25.6...+716.0°F	13:1	0.1°C 0.1°F	-32...-20°C -25.6...-4°F	±5°C ±9°F
			-20...+200°C -4...+392°F	±(1.5% m.v. + 2°C) ±(1.5% m.v. + 3.6°F)
			200...380°C 392...716°F	±(2.0% m.v. + 2°C) ±(2.0% m.v. + 3.6°F)

Temperature range for K probe

Range	Resolution	Accuracy
-50.0...+999.9°C -58.0...+999.9°F	0.1°C 0.1°F	±(1.5% m.v. + 3°C) ±(1.5% m.v. + 5°F)
1000...1370°C 1000...2498°F	1°C 1°F	±(1.5% m.v. + 2°C) ±(1.5% m.v. + 3.6°F)

Technical specification

		DIT-500	DIT-130
LCD display		segmented, with backlight	
spectral sensitivity		8~14 µm	
emissivity		digitally adjust from 0.10 to 1.00	
semi-conductor laser diode	**output power**	<1 mW	
	wavelength	630~670 nm	
	class	class 2(II) laser	
power supply		9 V alkaline battery NEDA 1604A or IEC 6LR61	
operating temperature range		0...50°C	
storage temperature		-20...+60°C	
humidity		10...90%	
indication of range overflow		the display will read the symbol "----"	the display will read symbols "-0L", "0L"
response time		150 ms	under 1 second
weight		350 g	290 g
dimensions		230 x 155 x 54 mm	190 x 111 x 48 mm

Standard accessories

carrying case (DIT-500 only)

mini-USB data transmission cable (DIT-500 only)

WAPRZUSBMNIB5

mini tripod (DIT-500 only)

WAPOZSTATYW

temperature measurement probe (type K)

WASONTEMK

Additional accessories

K-type temperature probe (bayonet)

WASONTEMP

K-type temperature probe (metal)

WASONTEMK2

M-10 carrying case (DIT-500 only)

WAFUTM10

S-1 carrying case (DIT-130 only)

WAFUTS1

Abbreviation „D:S" used in the specification of measurement means a distance-to-spot ratio.
Abbreviation „m.v." used in the specification of measurement means a measured value.