



Portable multipurpose infrared thermometers with TTS laser pointer



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The emissivity can be manually adjusted or through a keyboard from 0.10 to 1.00.

Description

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The emissivity can be manually adjusted or through a keyboard from 0.10 to 1.00.

Measuring unstable values is possible by programming the digital filter. In addition, the operator can activate measurement of minimum and maximum values to identify hot spots, Tmax-Tmin operations and ambient temperature compensation. The screen displays the current temperature measured and measurement mode.

Alarms

High and low alarms can be programmed and activated to identify hot spots during rapid scans or to monitor temperature over a long period of time. Alarms trigger an audible warning as well as a visual indication on the LCD screen.

Laser pointing system

An integrated dual laser pointer shows the actual size of the target (True Target Size, TTS) at different distances. This unique and innovative system overtakes the traditional dual crossed laser pointer and guarantees the identification of the real target surface area regardless of the optics.

Data storage

IRtec P series have an internal memory for up to 500 values tagged with real-time clock. Measurements can be downloaded to computer through USB. The data may be displayed as a list or graphically using IRLogman software as an option.

Thermocouple auxiliary input

In order to extend their operative capabilities, the instruments are also equipped with an auxiliary input for thermocouples type K and S. When used with a reference thermocouple, this feature can be used for automatic emissivity adjustment.

The optical system of IRtec P infrared thermometers consists in a high quality lens that brings



the infrared energy to the detector, a filter and a field stop, wich defines the visual cone and the minimum target size. The detector is placed at the focal point of the optical system. No focusing operations are required.

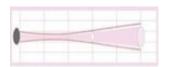
Key-points of IRtec P range of infrared thermometers:

- Wide temperature range: -30 to 2000°C
- Several spectral responses available to cover a large number of applications: 8-14 μm , 1.6 μm , 0.9 μm
- Short response time: < 150 ms
- Dual red laser pointer with True Target Size system
- Adjustable emissivity: 0.10 to 1.00

TTS dual spot laser - True Target Size

Every model of IRtec P series is equipped in standard with a **TTS dual spot laser, True Target Size**. This dual laser pointer system shows the true size of the target being measured at different distances, which prevents from measuring temperature outside of the target.

This unique and innovative system goes beyond the limits of the former crossed laser pointer based system. TTS dual laser guarantees the correct area diameter is being measured all along the optical path.





TTS vs traditional crossed pointer

How to shoot a target correctly

The infrared thermometer is well positioned to measure Target 1 temperature because the two laser points are on the target, i.e. make a smaller diameter than the target.

For Target 2, placed at 3000 mm, the thermometer has a measurement spot of 82 mm. One laser point reaches Target 2 but the second one does not. It means the thermometer measures not only Target 2 temperature but also its surroundings which a strong influence on the accuracy of the measurement.



Specifications

Infrared temperature measurement

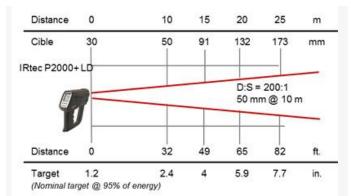
	IRtec P500+	IRtec P1000+	IRtec P1300+	IRtec P1600+	IRtec P2000+	
Temperature range	-30 to 1000°C	-30 to 1200°C	200 to 1300°C	600 to 1600°C	500 to 2000°C	
Spectral response	8-14 μm	8-14 μm	1.6 µm	0.9 μm	0.9 μm	
Emissivity	Adjustable from 0.10 to 1.00					
Accuracy	±0.75% RDG or 0.75°C		±0.25% RDG			
Stability	±0.01% FS/°C outside operating range of 23°C ±5°C					
Repeatability	±0.5% RDG or 0.5°C		±0.1% RDG			
Diameter @ distance	SF 10 mm @ 1 m	SF 7.2 mm @ 1 m	SF 6 mm @ 1 m	SF 5 mm @ 1 m	SF 5 mm @ 1 m	
	TF 10 mm @ 600 mm	LD 72 mm @ 10 m	LD 60 mm @ 10 m		LD 50 mm @ 10 m	
D:S (Optics)	SF 95:1 TF 60:1	140:1	170:1	200:1	200:1	
>Sampling time	< 150 ms					

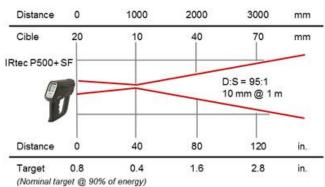
Contact temperature measurement by thermocouples

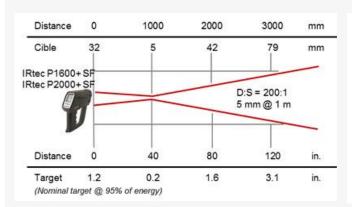
	Thermocouple type K	Thermocouple type S	
Range	From -100°C to +1370°C	From 0°C to +1760°C	
Accuracy	± (0.05% RDG + 0.4°C)	± (0.05% RDG + 0.4°C)	
Resolution	0.1°C	0.1°C	

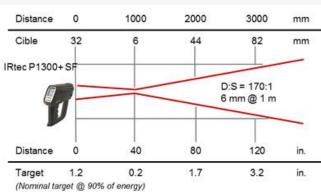
Optics

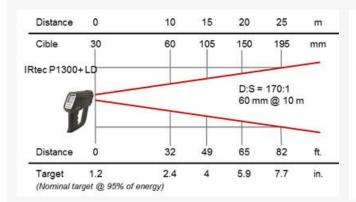


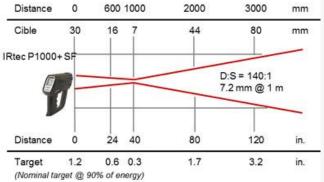




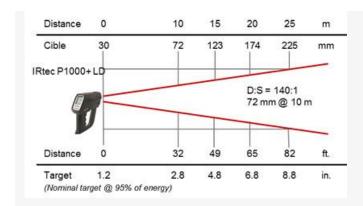












Further features

Calculation functions	Average, max, min, diff, ambient temperature compensation		
Laser	Dual TTS or parallel		

General specifications

Size	200 x 180 x 80 mm		
Weight	Net 0.8 kg - Gross 1.5 kg		
Display	High contrast custom LCD with automatic backlight		
Display resolution	1°C / °F / K		
Power supply	100, 115, 230 V ±10% (50/60 Hz)		
Battery	Rechargeable Li-ION Battery life: > 20 h (without backlight) Charging time: 6 h at 90% (instrument switched off)		
Communication interface	USB serial port, infrared port		
Data storage	500 input data structured by Tag (max. 20 Tag)		

Environmental specifications

	IRtec P500+	IRtec P1000+	IRtec P1300+	IRtec P1600+	IRtec P2000+
Operating range	From -10°C to +60°C				
Storage conditions	From -10°C to +60°C		From -30°C to +60°C		



Models and accessories

Instruments:

Ordering code structure: 119x - A - B - C - D / X

Please select the required options from tables A, B... below to define the right device reference.

1190 IRtec P500+: -30°C to 1000°C

Standard delivery includes:

- Base unit with internal memory, alarms and vinyl case
- Tc K/S auxiliary input
- IR printer port
- USB cable
- Rechargeable batteries + charger
- Certificate of calibration
- Instruction manual

Table A - Optics Laser

SF 95:1 Standard focus TTS dual red laser

Table B - Power supply

USA Li-ION / 120 V – USA plug

UK Li-ION / 240 V – UK plug

EUR Li-ION / 230 V – European plug

JAP Li-ION / 100 V – USA / Japan plug

Table C - Accessories

NO None

Table D - Calibration report

EC Factory traceable calibration report

Table X - Personal settings

ENG English instruction manual

FRA French instruction manual

1194 IRtec P1000+ Mk2: -30°C to 1200°C

Standard delivery includes:



- Base unit with internal memory, alarms and vinyl case
- Tc K/S auxiliary input
- IR printer port
- USB cable
- Rechargeable batteries + charger
- Certificate of calibration
- Instruction manual

Table A - Optic Laser

SF 140:1 Standard focusTTS dual red laser

LD Long Distance focusTTS dual red laser

Table B - Power supply

USA Li-ION / 120 V – USA plug

UK Li-ION / 240 V – UK plug

EUR Li-ION / 230 V – European plug

JAP Li-ION / 100 V – USA / Japan plug

Table C - Accessories

NO None

TELE 2x Sighting telescope

Table D - Calibration report

EC Factory traceable calibration report

Table X - Personal settings

ENG English instruction manual

FRA French instruction manual

1195 IRtec P1300+ Mk2: 200°C to 1300°C

Standard delivery includes:

- Base unit with internal memory, alarms and vinyl case
- Tc K/S auxiliary input
- IR printer port
- USB cable
- Rechargeable batteries + charger
- Certificate of calibration
- Instruction manual

Table A - Optic Laser

SF 170:1 Standard focusTTS dual red laser

LD Long Distance focusTTS dual red laser



Table B - Power supply

USA Li-ION / 120 V – USA plug

UK Li-ION / 240 V – UK plug

EUR Li-ION / 230 V – European plug

JAP Li-ION / 100 V – USA / Japan plug

Table C - Accessories

NO None

TELE 2x Sighting telescope

RED 1x Sighting Red Point

Table D - Calibration report

EC Factory traceable calibration report

Table X - Personal settings

ENG English instruction manual

FRA French instruction manual

1196 IRtec P1600+ Mk2: 600°C to 1600°C

Standard delivery includes:

- Base unit with internal memory, alarms and vinyl case
- Tc K/S auxiliary input
- IR printer port
- USB cable
- Rechargeable batteries + charger
- Certificate of calibration
- Instruction manual

Table A - Optic Laser

SF 200:1 Standard focus TTS dual red laser

Table B - Power supply

USA Li-ION / 120 V – USA plug

UK Li-ION / 240 V – UK plug

EUR Li-ION / 230 V – European plug

JAP Li-ION / 100 V – USA / Japan plug

Table C - Accessories

NO None

TELE 2x Sighting telescope



RED 1x Sighting Red Point

Table D - Calibration report

EC Factory traceable calibration report

Table X - Personal settings

ENG English instruction manual

FRA French instruction manual

1198 IRtec P2000+ Mk2: 500°C to 2000°C

Standard delivery includes:

- Base unit with internal memory, alarms and vinyl case
- Tc K/S auxiliary input
- IR printer port
- USB cable
- Rechargeable batteries + charger
- Certificate of calibration
- Instruction manual

Table A - Optic Laser

SF 200:1 Standard focus – TTS dual red laser

LD Long Distance focus – TTS dual red laser

Table B - Power supply

USA Li-ION / 120 V – USA plug

UK Li-ION / 240 V – UK plug

EUR Li-ION / 230 V – European plug

JAP Li-ION / 100 V – USA / Japan plug

Table C - Accessories

NO None

TELE 2x Sighting telescope

RED 1x Sighting Red Point

Table D - Calibration report

EC Factory traceable calibration report

Table X - Personal settings

ENG English instruction manual

FRA French instruction manual



Accessories:

BB260115 IRLogman software for Windows 98/2000/XP

EE300055 Sighting telescope system

EE300056 Red-point system

EE300301 Close Focus lens for P1300, P1600, P2000

EE420395 European plug

EE420396 USA plug

EE625034 Li-ION battery Charger w/o line plug

EE700476 USB cable

EE880028 Vinyl carrying case

F2137100 TC K/S contact probe

Packing information:

Size 200 x 180 x 80 mm

Weight (gross) 1.5 kg