

Specifications - SPOT R100

Measurement range:	550-1800 °C / 1022-3272 °F (ratio mode), 400-1800 °C / 750-3272 °F (overall)
Ratio:	550-1800 °C / 1022-3272 °F (ratio mode)
Detector 1:	550-1800 °C / 1022-3272 °F
Detector 2:	400-1800 °C / 750-3272 °F
Duo or Multi modes:	400-1800 °C / 750-3272 °F
Uncertainty:	Detector 1 and 2 modes ±0.25%K; All other modes ±1.0%K
Repeatability:	<1°C
Resolution:	<0.1°C
Detector Type:	Ratio: Short wavelength; Detector 1: 1.0 µm; Detector 2: 1.2 µm
Response Time:	Adjustable 1ms to 10s
Field of View:	230:1 to 90%
Focus Range:	300mm to infinity, adjustable locally or remotely using the web server or SPOT Viewer software
Processing Functions:	Averaging, Peak/Valley Picking, Mode Master, Background Compensation
Power Requirement:	Power over Ethernet or 24V DC
Display:	Local display with video and thermometer reading and settings
Interfaces:	0-20mA, 4-20mA, 24V DC, Ethernet (Modbus TCP-IP)
Inputs:	24V DC CMD In, Ethernet (Modbus TCP-IP)
Outputs:	0-20mA, 4-20mA, CMD Out relay, Ethernet (Modbus TCP-IP)
Settings:	Configurable locally (using the thermometer interface) or remotely (using the Webserver or SPOT Viewer) Emissivity, mode, current output range, alarm logic output and thresholds, network settings, focus and LED, language and user name
Software:	Live configuration and temperature display on any web browser. Optional SPOT Viewer software with datalogging, live and historical data trending plus remote image capture
Languages:	Integrated multiple language selection
Mounting:	56mm x 1.5mm thread or various protective SPOT mountings
Ambient Temp Range:	5-60°C specified, 0-70°C operating, Before cooling required
Sighting:	Integrated video camera with local display and remote image capture using SPOT Viewer software Sighting with patented pulsed Green LED focus pattern confirmation
Sealing:	IP65 (NEMA 4)
Warranty:	36 months



See our other literature for the **SPOT** Mountings and Accessories and **SPOT** Viewer software

LAND

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400-1800°C

750-3300°F

Multi-mode ratio pyrometers for industrial metal heat treatment applications

SPOT R100



www.spotthermometer.com

SPOT R100

SPOT is an innovative stand-alone pyrometer design with advanced integrated processing capabilities. The latest technologies utilized in **SPOT** make non-contact temperature measurement accurate, flexible and easy to use.

Combining Ethernet, Modbus TCP, Video, Analog and Alarm Outputs within one device, **SPOT** makes all these conveniently available to the operator. Pyrometer readings and configuration settings are available on the rear display and remotely via a web browser or through **SPOTViewer** software.

Motorized focus - SPOT features both local and remote adjustment.. **Flexible design with adaptors provide simplified installation and easy replacement of older thermometers.** **SPOT** is designed to be interchangeable with existing fixed spot pyrometers.

A valuable addition - LAND SPOTViewer software allows you to configure, display and log data from up to 254 different thermometer locations. To ensure security with multiple users, various levels of access are available. Data log frequency, file size, save and Archive locations are all configurable. **SPOTViewer** is the perfect choice for smaller operations where advanced process control systems may be absent.

FIVE OPERATING MODES

The **SPOT R100** offers different operating modes selectable from the set-up menu

Ratio	Short wavelength ratio - with signal strength output
Mono 1	Shorter wavelength, medium to high temperatures
Mono 2	Longer wavelength, low to medium temperatures
Multi	Extended range - Ratio in the mid and high range, with low temperature monochromatic with Emissivity correction
Duo	Extended range - Mono 2 at low temperatures, Mono 1 at high temperatures, using a combination of the two at medium temperatures

ADVANTAGES

This flexibility of design enables the **SPOT R100** to adapt to multiple temperature measurement scenarios. Change your materials or process parameters and continue to use the same instrument.

Updating from an older sensor to the **SPOT** form factor is flexible and easy.

Features and Benefits

Through-the-lens integrated camera

Easy target alignment and verification
low and high brightness environments

High Quality Optics

Features a durable sapphire protection window and ensures precise targeting and quality measurements

Integrated Web Server

Allows for remote adjustment and readings via any web browser

Signal Processing

All processing features are integrated into **SPOT**. No need for any separate processor unit

Patented Pulsed High Brightness LED Sighting

The thermometer confirms the focus distance and spot size. It also indicates both target size and location using an easily visible LED pattern. There are no laser safety requirements with the **SPOT** thermometer.

Rear Display and Controls

Target viewing, temperature reading and set-up through simple menu driven choices; no need for separate software

Power Options

Powered by either 24VDC or Power-over-Ethernet

- ◆ **Single person installation at sensor location** - local display and settings; no need for a second person in the control room
- ◆ **Industry standard 4-20mA linear temperature output** in addition to other outputs
- ◆ **Software** - **SPOTViewer** provides remote graphical display and data logging of multiple **SPOT** pyrometers
- ◆ **Password Access** - prevents unauthorized tampering

- ◆ **Durable Sapphire Protection Window** - resists scratches, solvents and easily cleaned with a soft cloth
- ◆ **Modbus TCP** - widely used and popular industrial protocol over Ethernet
- ◆ **Single Sensor Solution** - Ideal for use with customer PLC's or DCS systems; no requirement for a separate processor. Easy to implement in small or large organizations

SPOTViewer Software - Remote User Interface (option)



SPOT Local User Interface



Typical Applications

- ◆ Heat Treating
- ◆ Forging
- ◆ Casting

SPOT Local 'live video' process view mode



SPOT Webserver remote interface

