

# LAND

## AMETEK®

PROCESS & ANALYTICAL INSTRUMENTS

400-1800°C

750-3300°F

Multi-mode ratio  
pyrometers for industrial  
metal treatment applications

# SPOT R100



[www.spotthermometer.com](http://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 adapters 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

- |           |   |
|-----------|---|
| 1. Ratio  | Short wavelength ratio design   |
| 2. Mono 1 | Short wavelength, medium to high temperatures   |
| 3. Mono 2 | Short wavelength, low to medium temperatures  |
| 4. Multi  | Extended range with low temperature monochromatic and ratio in the mid and high range                     |
| 5. Duo    | Extended range - mono at low temperatures, and an average of two wavelengths in mid and high 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 **SPOT** form factor is flexible and easy.

**SPOT Viewer Software**
**SPOT menus**

### Typical Applications

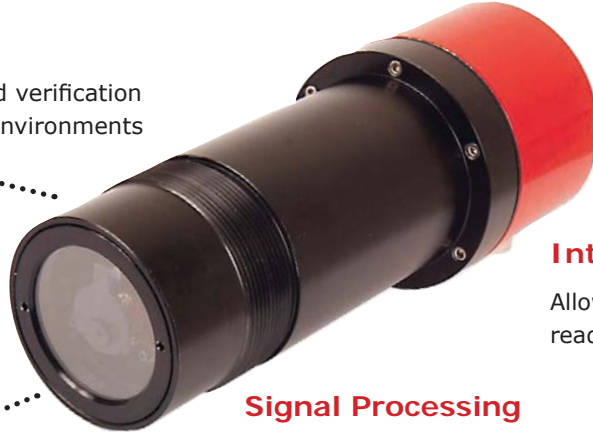
- ◆ Heat Treating
- ◆ Forging
- ◆ Casting



# 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

## Patented Pulsed High Brightness LED Sighting

Sensor confirms the focus distance and spot size better; indicates both target size and location using an easily visible pattern; no laser safety requirements

## Signal Processing

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



## 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** - **SPOT**Viewer provides remote 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

*SPOT control panel*

*Remote video view*



## Specifications - SPOTR100

Measurement range:	600-1800°C / 1100-3300°F (ratio mode), 400-1800°C / 750-3300°F (overall)
Uncertainty:	±0.25%K or 2°C (mono mode)
Repeatability:	< 1°C
Resolution:	0.1°C
Detector Type:	Short wavelength ratio
Sealing:	IP65 (NEMA 4)
Response Time:	Adjustable 1mS to 10S
Interfaces:	0-20mA DC, 4-20mA DC, Ethernet, Modbus TCP - all standard
Processing Functions:	Averaging, Peak Picking, Mode Master, Background Compensation
Power Requirement:	Power over Ethernet or 24V DC
Display:	Local display with video and thermometer reading and settings
Software:	Live configuration and temperature display on any web browser. Optional <b>SPOT</b> Viewer software with datalogging
Languages:	Integrated multiple language selection
Field of View:	230:1 to 90%
Mounting:	56mm x 1.5mm thread or various protective SPOT mountings
Ambient Temp Range:	Before cooling required 5-60°C specified, 0-70°C operating
Focus Range:	300mm to infinity, locally or remotely adjustable
Sighting:	Integrated video with local and remote display with patented pulsed Green LED focus pattern confirmation
Warranty:	36 months

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



# LAND

**AMETEK**<sup>®</sup>  
PROCESS & ANALYTICAL INSTRUMENTS

George R. Peters Associates ENGINEERING SALES REPRESENTATIVES

650 E. Big Beaver • Suite C • Troy, MI 48083  
(248) 524-2211 • Fax (248) 524-1758  
www.grpeters.com

Land Instruments International Ltd • Dronfield S18 1DJ • England  
Email: land.infrared@ametec.co.uk • [www.landinst.com](http://www.landinst.com) • Tel: +44 (0) 1246 417691 • Fax: +44 (0) 1246 410585

AMETEK Land, Inc. • 150 Freeport Road • Pittsburgh, PA 15238 • U.S.A.  
Email: irsales@ametec.com • [www.ametek-land.com](http://www.ametek-land.com) • Tel: +1 (412) 826 4444 • Fax: +1 (412) 826 4460

For a full list of international offices, please visit [www.landinst.com](http://www.landinst.com)



Applies in the UK



Applies in the USA

