Industrial Infrared Thermometer
Non-Contact Temperature Measurement with Integral Display and Analog Output

4 Models for Temperature Measurements up to 1370°C (2500°F)
±1% Rdg Accuracy
Voltage/Current Analog Output
Backlit LCD
Dual Display Design Indicates Min/Max/Avg or ΔT Temperatures
Adjustable Emissivity
Data Storage and Logging
High/Low Voltage Alarm Outputs with Red LED Indication (OS551A-High Alarm Only)
Fast 100 ms Response Time
Two-Way RS232 Communications Available
Available with NEMA 4 Plastic or Aluminum Housing, or with No Case for OEM Applications
Windows® Based PC Application Data Logging Software

The new OMEGA® OS550A series infrared thermometers offer an industrial, high performance, economical transmitter package with a wide choice of temperature ranges, optical fields of view and analog outputs to feed directly to panel meters, recorders, temperature/process controllers, data loggers, data acquisition systems or other process instrumentation.

Since the OS550A Series infrared thermometers do not use chopper motors or vibrator mechanisms, they can be mounted in any position and in hostile environments without suffering any loss in performance. This rugged design coupled with relatively small dimensions makes these sensors ideally suited for a wide variety of applications.

Specifications
General
Accuracy: ±1% rdg or 1.7°C (3°F), whichever is greater; 25°C ambient, 0.95 emissivity
Repeatability: ±(1% rdg + 1 digit)
Spectral Response: 8 to 14 microns
Emissivity: 0.10 to 1.00 in 0.01 steps
Response Time: 100 ms, 0 to 63.5% of final value
Display: Backlit LCD
Analog Output: 1 mV/degree, 0 to 5 Vdc or 4 to 20 mA
Alarms: High and low; red LED and audible indicators; two voltage outputs, 100 mA current to drive external relays
Power: 8 to 24 Vdc, 80 mA
PC Interface (OS552A/553A/554A Models Only): RS232, 2-way, PC user software included

Environmental
Rating: NEMA 4 (IP65); sensor head and plastic or aluminum electronics enclosure
Operating Ambient: 0 to 50°C (32 to 122°F) electronics and standard sensing head; 85°C (185°F) max temp for sensing head with OS550-WC water cooled jacket

Physical Dimensions:
Sensing Head: 109 L x 41 OD mm (4.3 x 1.63”); 1.5-20 thread
Electronics, Plastic Case: 120 H x 80 W x 51 mm L (4.75 x 3.15 x 2”)
Electronics, Aluminum Case: 115 H x 90 W x 56 mm L (4.5 x 3.5 x 2.2”)
Connections: 4.5 m (15’) sensor head and power/output cables included
Weight: 0.45 kg (12 oz) sensing head; 1.2 kg (42.3 oz) plastic case

Laser Sighting
Wavelength: 650 nm, red
Operating Distance: Up to 12 m (40’)
Max Laser Power Output: Less than 1 mW
Classification: FDA Class II Laser product; European Class 2
Beam Diameter: 5 mm
Operating Ambient: 0 to 50°C (32 to 122°F)

FREE Data Logging Software Included With OS552A, OS553A and OS554A

†† Refer to Accessories on next page for NIST calibration ordering information.
Available Accessories

- OSS50-MF mounting flange
- OSS50-MN mounting nut
- OSS50-AP air purge collar
- OSS50-WC air/water cooling jacket
- OSS50-MB mounting bracket
- OSS50-LS laser sighting with included battery pack

**Make it Wireless!**
The WRS232-USB transceiver can make the OSS550A wireless! Simply attach the WRS232 transceiver to the RS232 port on the OSS550A, and the WUSB transceiver to a USB port on your PC. Capable of full, two-way communications, the WRS232-USB operates transparently to the user. The WRS232-USB can extend the distance from your PC to your instrumentation, up to 40 m (130') in indoor/urban settings, or up to 120 m (400’) outdoors/line of sight.

**OEMAGACARE™ extended warranty program** is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE™ covers parts, labor and equivalent loaners.

**We make running changes when technical advances allow. Check at time of ordering for additional features.**

**Model No.** | **Description**
--- | ---
WRS232-USB | Wireless RS232 transceiver
OS550-AP | Air purge collar
OS550-WC | Air/water cooling jacket
OS550-MF | Mounting flange
OS550-MB | Right-angle mounting bracket
OS550-MN | Mounting nut
OS550-LS | Laser sighting**
CAL-3-IR† | NIST calibration certification
CAL-3-IR-X†† | NIST calibration for over 1000°F temp
PSR-24S | Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L | Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230 | Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads
PSR-24S-230 | Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads
PSR-24L-230 | Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads
PSR-24S-230 | Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads
TX8-100 | Power/output extension cable 30 m (100’)
OM-CONV-USB | RS232 to USB interface converter
OS550A-PCAB-15 | Power/output cable connector 4.5 m (15’)
OS550A-PCAB-100 | Power/output cable connector 30 m (100’)

**To Order** Visit omega.com/os550a for Pricing and Details

**OS550 Series Optical Field of View Diagrams**

**OS550A sensor head (included), shown with optional mounting bracket and mounting nut.**

**OS550 Series Accessories**

- **Available Accessories**
  - OSS550-MF mounting flange
  - OSS550-MN mounting nut
  - OSS550-AP air purge collar
  - OSS550-WC air/water cooling jacket
  - OSS550-MB mounting bracket
  - OSS550-LS laser sighting with included battery pack

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- **Model No.** | **Description**
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  - OS550-AP | Air purge collar
  - OS550-WC | Air/water cooling jacket
  - OS550-MF | Mounting flange
  - OS550-MB | Right-angle mounting bracket
  - OS550-MN | Mounting nut
  - OS550-LS | Laser sighting**
  - CAL-3-IR† | NIST calibration certification
  - CAL-3-IR-X†† | NIST calibration for over 1000°F temp
  - PSR-24S | Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
  - PSR-24L | Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
  - PSR-24L-230 | Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads
  - PSR-24S-230 | Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads
  - TX8-100 | Power/output extension cable 30 m (100’)
  - OM-CONV-USB | RS232 to USB interface converter
  - OS550A-PCAB-15 | Power/output cable connector 4.5 m (15’)
  - OS550A-PCAB-100 | Power/output cable connector 30 m (100’)

**** 1 unit suitable for aligning many sensor heads.
Optical Range Code Field of View (FOV)
1  Spot size 8.9 @ 609 mm (0.35 @ 24")
2  Spot size 12.7 @ 76 mm (0.5 @ 3")
3  Spot size 25.4 @ 508 mm (1 @ 20")
4  Spot size 25.4 @ 762 mm (1 @ 30")
5  Spot size 25.4 @ 914 mm (1 @ 36")
6  Spot size 3.8 @ 152 mm (0.15 @ 6")

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<td>1 mV/Deg</td>
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<td>4 to 20 mA</td>
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NEMA 4 Rated Plastic Enclosure

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* Specify optical range code from optical table, above (-2 field of view is not offered with OS554A).

To order with longer sensor head cable, up to 15 m (50'), add suffix "-(†)FT" to model number for additional cost for each additional foot over 4.5 m (15').
† Specify length in feet.

Ordering Examples: OS552A-MA-2, infrared thermometer with -23 to 538°C (-10 to 1000°F) range, 4 to 20 mA output and spot size 12.7 mm (0.5") at 76 mm (3").
OS551A-MA-2-35FT, OS551 with current output, 0.5 at 76 mm (3") FOV, 10.6 m (35") sensor head cable.
OCW-3, OMEGACARE™ extends standard 2-year warranty to a total of 5 years.