

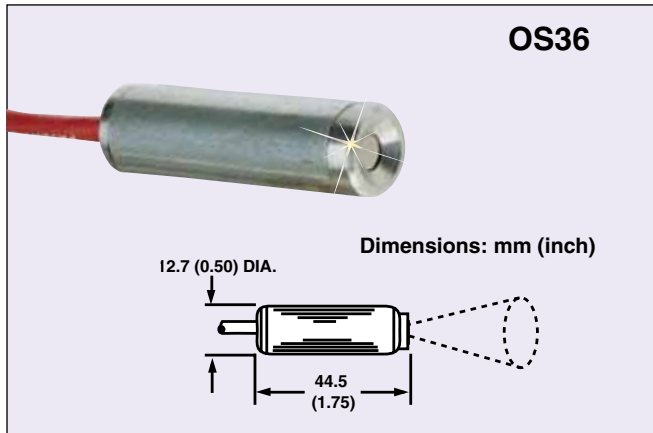
Infrared Thermocouples

OS36 Series

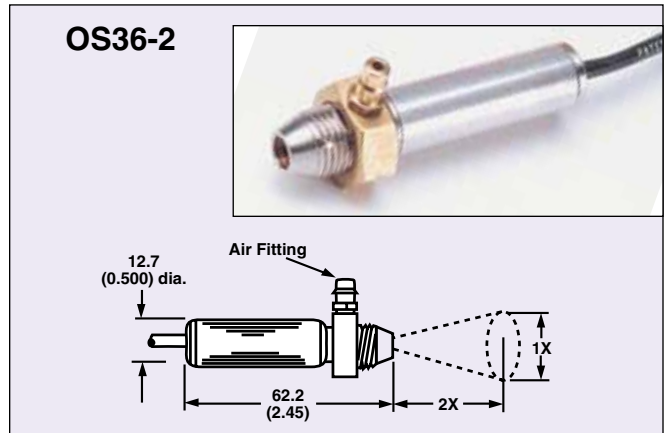


For a Complete Selection
of Meters and Controllers
For Use with OMEGA's
Infrared Thermocouples,
See omega.com

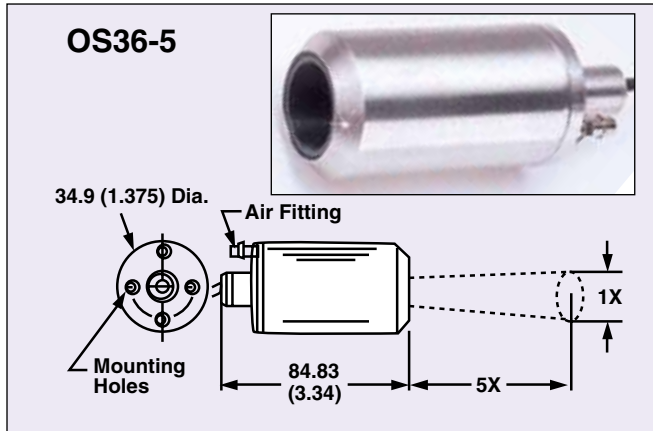
OS36



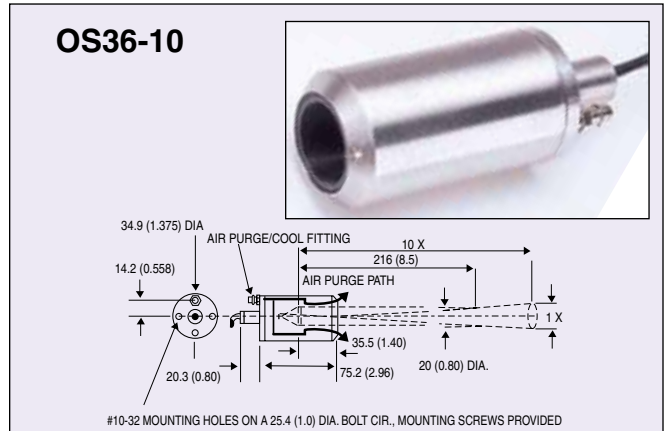
OS36-2



OS36-5



OS36-10



- ✓ No Thermal Mass Errors
- ✓ No Moving Parts
- ✓ Self-Powered with No Internal or External Power Requirements
- ✓ No Frictional Heat Errors for Moving Surfaces
- ✓ Temperature Compensated
- ✓ Use with Standard Thermocouple Indicators and Controllers

The unique OS36 infrared thermocouple combines low cost with the advantages of non-contact temperature measurement. It produces an output signal compatible with any standard J, K, T, or E thermocouple instrumentation. The thermocouple's accuracy is specified for target emissivity between 0.8 and 1.0. For other emissivity values, readings can be corrected to provide accurate measurements. Even without correction, the readings are extremely repeatable, for use in process and quality-control applications.

Specifications

Accuracy: $\pm 2\%$ of nominal range; blackbody source

Repeatability: $\pm 1\%$ rdg

Temperature Coefficient: $\pm 0.02\%$ nominal range per $^{\circ}\text{F}$

Temperature Compensation Range: Complies with ASTM standards over 27 to 93°C (80 to 200°F) range

Operating Ambient Temperature Range: -18 to 85°C (0 to 185°F) with internal cold junction compensation

Ambient Temperature Compensation: Internal temperature cold junction compensation up to 538°C (1000°F)
water-cooled, 400°C (750°F) air-cooled, with cooling jacket option model OS36-APC

Storage Temperature Range: -45 to 121°C (-50 to 250°F)

Output Impedance: $3\text{ k}\Omega$

Response Time: 80 ms

Spectral Response: 6.5 to 14 microns

Field of View: 60° ; specified accuracy for target distances up to 12.7 mm (0.5")

Dimensions: 44.5 L x 12.7 mm Dia. (1.75 x 0.5"); 2.4 m (8') PFA coated lead wires

Housing: Stainless steel with silicon window, hermetically encapsulated

Weight: 15 g (0.5 oz) head only



The DP41 thermocouple indicator is a high-accuracy meter, with 0.01° resolution; computer interface and analog/digital outputs are available.

Range Chart

Range Code	Temperature Range (2% Accuracy)
50F	-18 to 27°C (0 to 80°F)
80F	10 to 49°C (50 to 120°F)
98.6F	16 to 39°C (60 to 102°F)
140F	25 to 80°C (80 to 180°F)
180F	70 to 104°C (160 to 220°F)
240F	95 to 130°C (200 to 270°F)
280F	125 to 155°C (260 to 310°F)
340F	145 to 175°C (290 to 350°F)
440F	170 to 250°C (340 to 480°F)

To Order Visit omega.com/os36 for Pricing and Details

Model No.†	Description
OS36-J-(*)	Type J thermocouple
OS36-K-(*)	Type K thermocouple
OS36-T-(*)	Type T thermocouple
OS36-E-(*)	Type E thermocouple
OS36-MB	Mounting bracket
OS36-MR	Mounting ring
OS36-APC	Cooling jacket

* Specify temperature range code from range chart above.

(#) Specify calibration, J, K, E or T. **Note:** Kit includes 1 unit each of the most popular ranges (6 total) of 1 thermocouple calibration.

Note: Standard unit configuration is stripped leads. To order with GMP subminiature low-noise thermocouple connector pair, add suffix “-GMP” to model number for additional cost. To order with GST standard size low-noise thermocouple connector pair, add suffix “-GST” to model number for additional cost.

Ordering Examples: OS36-K-180F, infrared thermocouple sensor, Type K, with 160 to 220°F range.

OS36-J-140F-GMP, infrared thermocouple sensor, Type J, with 80 to 180°F range, GMP low-noise subminiature connectors.

OCW-3, OMEGACARESM extends standard 2-year warranty to a total of 5 years for an additional cost.

Right-Angle Models†

To order with right-angle view, for use in difficult-to-view applications, change model number from “OS36” to “OS36-RA” for additional cost.

† 8-angle models come with 0.9 m (3') leads

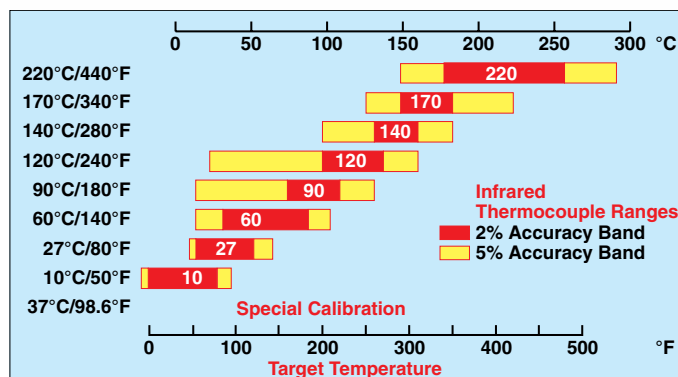
Ordering Example: OS36-RA-K-240F, infrared thermocouple, Type K, 95 to 130°C range, right-angle view, stripped lead termination.



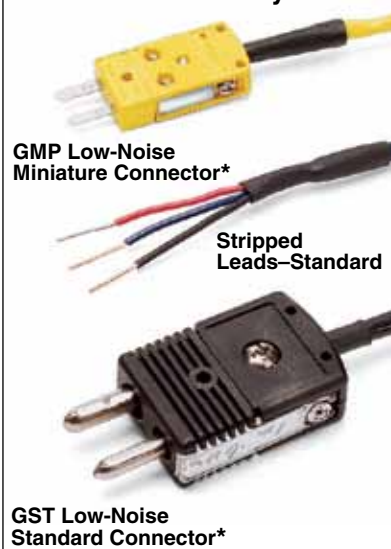
OS36 Series with Stainless Steel housing shown actual size.



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



Termination Styles



* Both the GMP and GST termination styles include the mating connector.