

Close-Focus Adjustable Range IR Thermocouples

OS37/38-CF Series
Starts at

\$719



- ✓ 30° or 1°(60:1) Field of View
- ✓ Built-In Air Purge
- ✓ Self-Powered
- ✓ Measurements to 2500°C (4500°F)

The OS37-CF/OS37-60CF Series infrared thermocouples for high-emissivity targets (non-metals and coated metals) and the OS38-CF/OS38-60CF Series for low-emissivity targets (clean metals) feature an internal screw that adjusts the 2% accuracy band anywhere within the overall temperature range. All of these units use a lens to produce a minimum spot at a focal point. Models with 30° optics produce a rectangular minimum spot size in the focal plane by using a masked detector. Models with 1° (60:1) optics produce a more conventional round minimum spot size at a focal point. All models feature a built-in air purge.

Specifications

Linear Range Selections:

J, K, T, E, R, or S; adjustable over entire sensing range

Output Impedance:

OS37: 6 to 13 kΩ

OS38: 9 to 18 kΩ

Operating Ambient Temperature Range:

-18 to 85°C (0 to 185°F)

Air Purge: Built-in

Ambient Temperature Compensation: With air flow of 1.1 SCFM (20 psig), maximum ambient is 204°C (400°F)

Accessory

Model No.	Price	Description
EE-1902	\$45	Reference Book: Pocket Book of Electrical Engineering



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.

OS37-CF, \$719, shown close to actual size.



Termination Styles

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

GMP low-noise miniature connector.

Shown smaller than actual size.

GST low-noise standard connector.



MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)

Model No.	Price	Field of View
High-Emissivity Models		
OS37-CF-(*)	\$719	30°
OS37-60CF-(***)	935	1°
Low-Emissivity Models		
OS38-CF-(**)	\$719	30°
OS38-60CF-(***)	935	1°

* Specify thermocouple Type J, K, E or T. ** Specify thermocouple Type J or K. *** Specify thermocouple Type R or S.

Comes complete with set of apertures and operator's manual.

Note: Stripped leads are standard.

To order with GMP subminiature low-noise thermocouple connector pair, add suffix "-GMP" to model number, and \$12 to price.

To order with GST standard size low-noise thermocouple connector pair, add suffix "-GST" to model number, and \$12 to price.

Ordering Examples: OS37-60CF-R-GMP, high-emissivity sensor, 1° field of view, Type R output, with GMP low-noise subminiature connectors, \$935 + 12 = **\$947**. OCW-2, OMEGACARESM extends standard 2-year warranty to a total of 4 years (\$168), \$935 + 168 = **\$1103**. OS37-CF-K, high emissivity sensor, 30° field of view, Type K output, **\$719**.

Model No.	Field of View	Min Spot Size mm (in)	Spectral Response	Range† mm (in)	Dimensions L x Dia./mm (in)	Weight g (oz)
OS37-CF	30°	2 x 15 (0.1 x 0.6) @ 40 (1.6)	2 to 20 microns	-18 to 1370 (0 to 2500)	58.4 x 35 (2.3 x 1.375)	184 (6.5)
OS37-60CF	1°	6 (0.25) @ 305 (12)	2 to 20 microns	540 to 2200 (1000 to 4000)	213 x 35 (8.375 x 1.375)	570 (20)
OS38-CF	30°	2 x 15 (0.1 x 0.6) @ 40 (1.6)	0.1 to 5 microns	260 to 1370 (500 to 2500)	58.4 x 35 (2.3 x 1.375)	184 (6.5)
OS38-60CF	1°	6 (0.25) @ 305 (12)	0.1 to 5 microns	820 to 2500 (1500 to 4500)	213 x 35 (8.375 x 1.375)	570 (20)

† Measurement is practical beyond thermocouple table values by use of radiation laws. Polynomials available on request. Units must be adjusted for a narrow 2% accuracy range in field.

Adjustable-Range Infrared Thermocouples

OS37/OS38 Series
Starts at

\$569



- ✓ 10:1, 20:1, or 100:1 Optics Available
- ✓ Built-In Air Purge
- ✓ J or K Thermocouple Output Signal; R Type for 100:1 Models
- ✓ Self-Powered
- ✓ Temperature Compensated
- ✓ Measurements to 2760°C (5000°F)

The OS37 Series infrared thermocouples for high-emissivity targets (non-metals and coated metals) and OS38 Series low-emissivity units (clean metals) feature an internal screw that adjusts the 2% accuracy band anywhere within the overall temperature range. Both series are available in 10:1, 20:1, or 100:1 optics. All models have a built-in air purge collar that conveniently and efficiently maintains optical cleanliness in harsh environments.

Specifications

Accuracy: 2%

Linear Range Selections: J, K or R; adjustable over entire sensing range

Spectral Response:

OS37: 2 to 20 microns

OS38: 0.1 to 5 microns

Output Impedance:

OS37: 6 to 13 kΩ

OS38: 9 to 18 kΩ

Operating Ambient Temperature

Range: -18 to 85°C (0 to 185°F)

Air Purge: Built-in

Ambient Temperature

Compensation: With air flow of 1.1 SCFM (20 psig), maximum ambient is 204°C (400°F)

Dimensions:

Length: 9.55 cm (3.76"), 10:1 optics;

10.54 cm (4.25"), 20:1 optics;

26.67 cm (10.5"), 100:1 optics

Diameter: 3.49 cm (1.375")

Weight: 184 g (6.5 oz), 10:1 optics;

230 g (8 oz), 20:1 optics;

570 g (20 oz), 100:1 optics



Shown with CN77000
MICROMEGA® Series
1/16 DIN controller,
see page P-37.

OS37-10-K, \$569, shown
smaller than 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.

☐ **MOST POPULAR MODEL HIGHLIGHTED!**

To Order (Specify Model Number)

Model No.	Price	Field of View
High-Emissivity Models		
OS37-10-(*)	\$569	10:1
OS37-20-(*)	659	20:1
OS37-100-R	1105	100:1
Low-Emissivity Models		
OS38-10-(*)	\$569	10:1
OS38-20-(*)	659	20:1
OS38-100-R	1105	100:1

Model No.	Optics	Field of View	Min Spot Size: mm (in)	Range† °C (°F)
OS37-10	10:1	6°	13 (0.5)	-45 to 1370 (-50 to 2500)
OS37-20	20:1	3°	6 (0.25)	260 to 1650 (500 to 3000)
OS37-100	100:1	0.6°	20 (0.8)	540 to 2760 (1000 to 5000)
OS38-10	10:1	6°	13 (0.5)	260 to 1370 (500 to 2500)
OS38-20	20:1	3°	6 (0.25)	540 to 1930 (1000 to 3500)
OS38-100	100:1	0.6°	20 (0.8)	820 to 2760 (1500 to 5000)

† Measurement is practical beyond thermocouple table values by use of radiation laws. Polynomials available on request. Units must be adjusted for a narrow 2% accuracy range in field.

* Specify thermocouple Type J or K.

Comes complete with set of apertures and operator's manual.

Note: Stripped leads are standard. To order with GMP subminiature low-noise thermocouple connector pair, add suffix "-GMP" to model number, and \$12 to price. To order with GST standard-size low-noise thermocouple connector pair, add suffix "-GST" to model number, and \$12 to price.

Ordering Examples: OS38-10-K-GMP, low-emissivity sensor, 10:1 optics, Type K, with GMP low-noise subminiature connectors, \$569 + 12 = \$581.

OS37-10-K, high-emissivity sensor, 10:1 optics, Type K, \$569. OCW-2, OMEGACARESM extends standard 2-year warranty to a total of 4 years (\$102), \$569 + 102 = \$671.

omega.co.uk®

Your One-Stop Source for Process Measurement and Control!

Freephone 0800 488 488 | International +44(0) 161 777 6622 | Fax +44(0) 161 777 6622 | Sales@omega.co.uk

www.omega.co.uk



UNITED STATES

www.omega.com

1-800-TC-OMEGA
Stamford, CT.

CANADA

www.omega.ca

Laval(Quebec)
1-800-TC-OMEGA

GERMANY

www.omega.de

Deckenpfronn, Germany
0800-8266342

UNITED KINGDOM

www.omega.co.uk

Manchester, England
0800-488-488
+44-(0)161-777-6611

FRANCE

www.omega.fr

0800-466-342

BENELUX

www.omega.nl

0800-099-33-44



More than 100,000 Products Available!

• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders, Relative Humidity Measurement Instruments, PT100 Probes, PT100 Elements, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples, Thermowells and Head and Well Assemblies, Transmitters, Thermocouple Wire, RTD Probes

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers, Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ethernet and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters