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)

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

To Order (Specify Model Number)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Price</th>
<th>Field of View</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High-Emissivity Models</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OS37-CF-(*)</td>
<td>$719</td>
<td>30°</td>
</tr>
<tr>
<td>OS37-60CF-(***</td>
<td>935</td>
<td>1°</td>
</tr>
<tr>
<td><strong>Low-Emissivity Models</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OS38-CF-(**)</td>
<td>$719</td>
<td>30°</td>
</tr>
<tr>
<td>OS38-60CF-(***)</td>
<td>935</td>
<td>1°</td>
</tr>
</tbody>
</table>

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

Note: Stripped leads are standard.

Ordering Examples: OS37-60CF-R-GMP, high-emissivity sensor, 1° field of view, Type R output, with GMP low-noise thermocouple connector pair, $935 + 12 = $947.
OS37-60CF-R-GMP, high-emissivity sensor, 1° field of view, Type R output, with GMP low-noise thermocouple connector pair, $935 + 12 = $947.
OS37-CF-K, high emissivity sensor, 30° field of view, Type K output, $719.

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

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

† 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: 8.48 cm (3.34"), 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

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<thead>
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<tbody>
<tr>
<td>High-Emissivity Models</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OS37-10(*)</td>
<td>$569</td>
<td>10:1</td>
</tr>
<tr>
<td>OS37-20(*)</td>
<td>659</td>
<td>20:1</td>
</tr>
<tr>
<td>OS37-100-R</td>
<td>1105</td>
<td>100:1</td>
</tr>
<tr>
<td>Low-Emissivity Models</td>
<td></td>
<td></td>
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<tr>
<td>OS38-10(*)</td>
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<td>OS38-100-R</td>
<td>1105</td>
<td>100:1</td>
</tr>
<tr>
<td>Accessory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OS36-MB2</td>
<td>$35</td>
<td>Mounting bracket</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Model No.</th>
<th>Optics</th>
<th>Field of View</th>
<th>Min Spot Size: mm (in)</th>
<th>Range† °C (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS37-10</td>
<td>10:1</td>
<td>6°</td>
<td>13 (0.5)</td>
<td>-45 to 1370 (-50 to 2500)</td>
</tr>
<tr>
<td>OS37-20</td>
<td>20:1</td>
<td>3°</td>
<td>6 (0.25)</td>
<td>260 to 1650 (500 to 3000)</td>
</tr>
<tr>
<td>OS37-100</td>
<td>100:1</td>
<td>0.6°</td>
<td>20 (0.8)</td>
<td>540 to 2760 (1000 to 5000)</td>
</tr>
<tr>
<td>OS38-10</td>
<td>10:1</td>
<td>6°</td>
<td>13 (0.5)</td>
<td>260 to 1370 (500 to 2500)</td>
</tr>
<tr>
<td>OS38-20</td>
<td>20:1</td>
<td>3°</td>
<td>6 (0.25)</td>
<td>540 to 1930 (1000 to 3500)</td>
</tr>
<tr>
<td>OS38-100</td>
<td>100:1</td>
<td>0.6°</td>
<td>20 (0.8)</td>
<td>820 to 2760 (1500 to 5000)</td>
</tr>
</tbody>
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* 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.
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- **pH and Conductivity**
  Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

- **Data Acquisition**

- **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, Strain Gages, Torque Transducers, Valves

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