

# Rugged Infrared Thermocouple

## 11° (5:1) Field of View

### Integral Air Cool/Purge Head



#### OS36-5 Series



- ✓ High-Quality Infrared Thermocouple
- ✓ All Stainless Steel Construction
- ✓ 5:1 Field of View
- ✓ Built-In Air Purge
- ✓ J, K, E, or T Thermocouple Output Signal
- ✓ Self-Powered
- ✓ Temperature Compensated



OS36-5-K-140F shown smaller than actual size.

The OS36-5 Series extends the range of applications for infrared thermocouple thermometry to situations in which the sensor is mounted remotely from the target. To the ruggedness and ease of use of the original OS36 Series, the new OS36-5 Series adds hermetic sealing and an internal air cool/purge system. This series exceeds all applicable NEMA standards and is intrinsically safe when used with appropriate barriers.

#### Specifications

**Accuracy:** ±2% of nominal range; blackbody source

**Repeatability:** ±1% rdg

**Temperature Coefficient:**  
±0.02% nominal range per °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

**Air Purge:** Built-in

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

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

**Response Time:** 80 ms

**Spectral Response:** 6.5 to 14 microns

**Range†:** -45 to 1100°C (-50 to 2000°F)

**Field of View:** 11° (5:1)

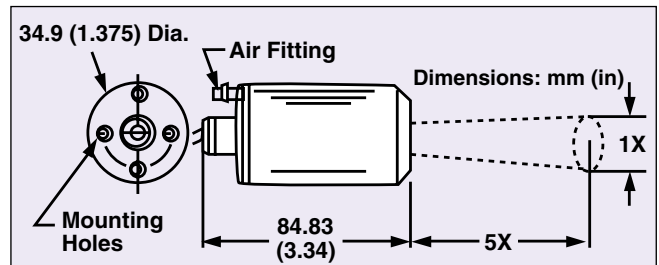
**Minimum Spot Size:** 20 mm (0.8")

**Output Impedance:** 4 to 8 kΩ (varies by model)

**Dimensions:** 8.38 L x 3.49 cm Dia. (3.3 x 1.375");  
0.9 m (36") PFA coated lead wires

**Weight:** 184 g (6.5 oz) with cable

† See Range Chart for linear ranges. Measurement is practical beyond thermocouple table values by use of radiation laws. Polynomials available upon request.



#### 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

Model No.	Description
OS36-5-J-(* )	J thermocouple
OS36-5-K-(* )	K thermocouple
OS36-5-T-(* )	T thermocouple
OS36-5-E-(* )	E thermocouple

\* Specify temperature range code from range chart above. Comes complete with operator's manual.

**Note:** Stripped leads are standard.

**OS36-5-K-240F**, IR thermocouple sensor Type K with 95 to 130°C (200 to 270°F) range.