

## CS SERIES HIGH TEMPERATURE SOURCES

The CS Series of cavity type high temperature blackbodies incorporates three decades of continuous improvement. EOI infrared sources have set the performance standard in the most demanding laboratories worldwide since 1964.

The excellent uniformity, long term stability, repeatability and high emissivity of the CS Series provide a known output for testing and calibration of the most sensitive infrared sensors, thermometers, imaging systems and radiometric devices.

### Configuration

The CS Series blackbodies are available in bench top configuration or integrated into one of the many Target Projector/Simulators and Automatic Test Stations EOI offers. Standard cavity sizes from 0.25" to 2.0" cavity diameters and temperature ranges up to 1350°C are available.



### Controller

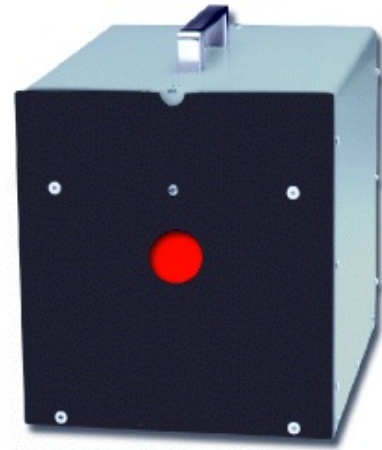
Each CS Series blackbody is supplied with a digital controller. Proportional, integral and derivative (PID) parameters are tuned individually for each blackbody to yield excellent stability (typically  $\pm 0.25^{\circ}\text{C}$ ), and repeatability with fast slew rates and settling times. Temperature of the blackbody can be set with  $1^{\circ}\text{C}$  resolution and actual temperature is displayed to  $1^{\circ}\text{C}$  on the front panel of the controller.

### Computer Interfaces

Blackbody temperature can be set manually from the front panel keypad or automatically using the optional RS-232 computer interface.

### Case Temperature

The case will never exceed  $10^{\circ}$  above ambient.



### Baffle Plate

An air cooled baffle plate is standard with cavities 0.25 inch or larger.

### Apertures

Each CS blackbody is equipped with either a manually indexed aperture wheel. A water cooled aperture holder and filter wheels are also available.

Apertures may be added from EOI's extensive list of standard apertures. EOI can also supply custom apertures to meet your requirements.

**The CS Series blackbody temperature can be set manually and features:**

- ◆ Closed Case Calibration
- ◆ Fast Heating and Cooling Rates
- ◆ Temperature Ranges to  $1350^{\circ}\text{C}$
- ◆ Cavity Diameters to 2.0"
- ◆ Manual Aperture Wheel
- ◆ 2 Year Warranty



**Calibration**

Each CS blackbody is calibrated at EOI prior to shipment. Recommended calibration cycle is 6 months. Calibration is traceable to the National Institute of Standards and Technology (NIST). The two point calibration table is stored in memory and is easily updated via the front panel keypad.

**Options:**

Manual Filter Wheel  
RS-232 Interface  
Monitor Thermocouple

**Ordering Suffix**

/F  
/R  
/T

**Standard Models**

TEMPERATURE RANGE 50 TO 1050°C	
Model	Cavity Diameter
CS1050-025	0.25"
CS1050-050	0.50"
CS1050-100	1.00"
CS1050-200	2.00"
TEMPERATURE RANGE 50 TO 1250°C	
CS1250-025	0.25"
CS1250-050	0.50"
CS1250-100	1.00"
CS1250-200	2.00"
TEMPERATURE RANGE 50 TO 1350°C	
CS1350-100	1.00"
CS1350-200	2.00"

**Specifications**

Stability	± 0.25°C
Uniformity	±0.5 to ±3°C
Emissivity	0.97 to 0.99
Set Point Resolution	1.0°C
Display Resolution	1.0°C