

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 1250°C are available.

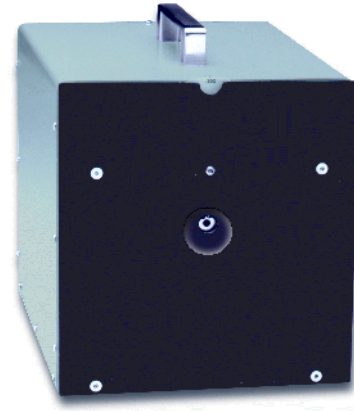


Controller

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/C resolution and actual temperature is displayed to 1/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.



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 or aperture holder. 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 feature:

- **Closed Case Calibration**
- **Fast Heating and Cooling Rates**
- **Temperature Ranges to 1250°C**
- **Cavity Diameters to 2 Inches**
- **CE Certification**
- **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 Aperture Wheel
 Manual Filter Wheel
 Modulator, Fixed
 Frequency
 RS-232 Interface
 Monitor Thermocouple

Ordering Suffix

/A
 /F
 /MOD
 /R
 /T

STANDARD MODELS

TEMPERATURE RANGE 50 TO 1050°C	
Model	Cavity Diameter
CS1050-025	0.250
CS1050-050	0.500
CS1050-100	1.000
CS1050-200	2.000
TEMPERATURE RANGE 50 to 1250°	
CS1250-025	0.250
CS1250-050	0.500
CS1250-100	1.000
CS1250-200	2.000

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

Power Requirements

The CS blackbodies operate from 100, 120, 220, or 240 VAC ± 10% (switch selectable), 50/60 Hz. The larger systems operate on 220V and may require a power amplifier in addition to the controller. Standard cable lengths between controller and blackbody or controller/output stage and output stage/blackbody are 8 feet. The plug-in mains power cable is also 8 feet long.

How to Order

Select desired model and specify option by adding suffix;

Example:

Model CS1050-025 /A -- Temperature range 50 to 1050/C, 0.25" diameter cavity with manual aperture wheel.

This is data sheet E0675B. Information regarding this data sheet and any requests for data sheets may be directed to eoi@electro-optical.com.

Specifications subject to change without notice.

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