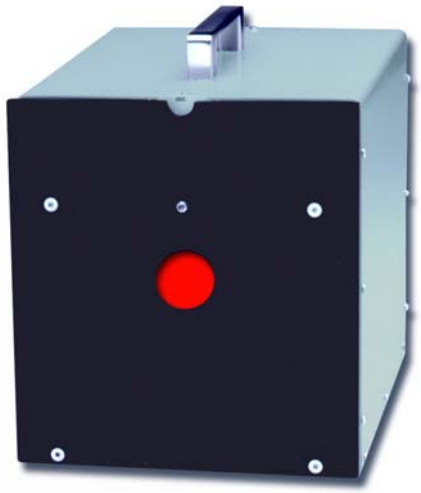
SS SERIES
HIGH TEMPERATURE SOURCES

The EOI Secondary Standards Series of blackbodies incorporates four 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 SS Series provide a known output for testing and calibration of the most sensitive infrared sensors, thermometers, imaging systems and radiometric devices.



Configuration
The SS 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 1350ºC are available.

Controller
Each SS Series blackbody is supplied with a digital 19" rack mount controller. Proportional, integral and derivative (PID) parameters are tuned individually for each blackbody to yield excellent stability (typically ±0.25ºC), and repeatability with fast slew rates and settling times. Temperature of the blackbody can be set with 0.1ºC resolution and actual temperature is displayed to 0.01ºC on the front panel of the controller.

Computer Interfaces
Blackbody temperature can be set manually from the front panel keypad or automatically using the IEEE488 or RS232 computer interfaces. RS422 and RS485 are available as options.

Case Temperature
The case temperature will never exceed 10ºC above ambient.

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

Apertures
Each SS blackbody is equipped with either a manually indexed aperture wheel or aperture holder.

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

The SS Series blackbody temperature can be set manually and features:

- ***Closed Case Calibration***
- ***High Emissivity – 0.999***
- ***Fast Heating and Cooling Rates***
- ***Temperature Ranges to 1350ºC***
- ***Cavity Diameters to 1.0"***
- ***2 Year Warranty***

Electro Optical Industries, Inc.

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Calibration
Each SS 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.

Operating Ambient
The SS blackbody is designed to operate over an ambient temperature range of –40 to +60ºC. The SS temperature controller will operate over an ambient temperature range of 0 to 50ºC.

Optional Equipment Available :
Manual Aperture Wheel
Manual Filter Wheel
Modulator, Fixed Frequency
Modulator, Variable Frequency
Modulator, Phase Locked
Solenoid Shutter
RS422
RS485

Standard Models

Temperature Range			Cavity Diameter
50 to 1050°C	**50 to 1250°C**	**50 to 1350°C**	
Model	Model	Model	Diameter
SS1050-025	SS1250-025	SS1350-025	0.25”
SS1050-050	SS1250-050	SS1350-050	0.50”
SS1050-100	SS1250-100	SS1350-100	1.00”

Specifications

Stability	±0.1 to ±0.25ºC
Uniformity	±0.5 to ± 3ºC
Emissivity	0.999
Set Point Resolution	0.1ºC
Display Resolution	0.1ºC

Power Requirements
The SS 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 main power cable is also 8 feet long.

How to Order: Select desired model and specify option by adding suffix;
Example: Model SS1050-025/AM -- Temperature range 50 to 1050°C, 0.25" diameter cavity with manual aperture wheel.

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