

BBS1500-38

BLACK BODY CALIBRATION SOURCE



Large Aperture, Radiometric Temperature Source for Calibration of Pyrometers and/or Thermal Imaging Cameras

OVERVIEW

The BBS1500-38 is a benchtop Blackbody ideal for the calibration verification of pyrometers and thermal imaging cameras. It is ideally used for the calibration of short wavelength pyrometers and thermal imaging cameras between 300 and 1500°C. The large aperture size allows for easy alignment between the blackbody and the device under test.

The BBS1500-38 calibration system combines the features of a precisely controlled temperature source for the calibration and adjustment task.

APPLICATIONS

The BBS1500-38 is a mid/high temperature blackbody calibration source providing high emissivity, uniformity, and stability. It is used as a precision Radiance Source for Calibration of:

- Infrared Thermometers
- FPA Detectors
- Thermal Imaging
- Cameras
- Radiometers
- Heat Flux Meters,
- Spectrophotometers



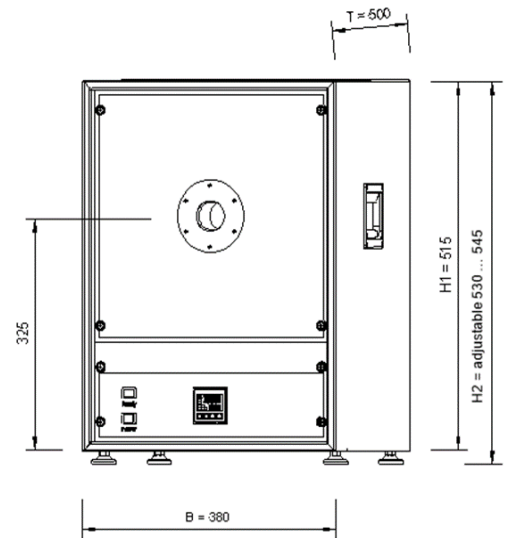
BBS1500-38 FEATURES

- Wide, adjustable temperature range: 300 to 1500°C (572 to 2732°F with 38 mm (1.5 in) aperture
- Precise calibration of pyrometers with spot sizes up to 24 mm (1 in)
- Set point in 1° increments with a temperature stability of better than 0.5° over 30 min
- Set point and actual temperature values are displayed simultaneously
- Fast heat up time: 1300°C in 50 minutes
- Cylindrical cavity for uniform temperature radiation
- Thermometric or radiometric calibration, high emissivity of 0.99 ± 0.005, excellent stability
- Cooling fan for safe enclosure operating temperature
- Traceability to International Temperature Standard ITS 90



RELIABLE & PRECISE CALIBRATIONS

The BBS1500-38 is an adjustable temperature blackbody source with a wide temperature range of 300 to 1500°C (572 to 2732°F) and a 38 mm (1.5 in) aperture. It is capable of precise calibration of pyrometers/thermal imaging cameras with spot sizes of up to 1 inch. The BBS 1500-38 outperforms other blackbodies on the market with fast heat up times: 1300°C in 50 minutes. With its cylindrical cavity for providing uniform temperature radiation and simultaneous display of set point and actual temperature values, this precision blackbody is reliable and simple to operate.



ORDERING INFORMATION

Part Number	Description
BBS1500-38	PSC Model BBS1500-38 Blackbody Calibration Source

SPECIFICATIONS

Temperature Range	300°C to 1500°C (572°F to 2732°F)
Aperture Diameter	38 mm (1.5 in)
Emmissivity	0.99 ± 0.005
Measurement Uncertainty	2°C + 0.0025 • T (°C)
Reproducibility	0.5°C + 0.001 • T (°C)
Control Stability	0.3°C
Display Resolution	0.1
Temperature Consistency	0.3 K + 0.001 • T (°C) (for the central area Ø 20 mm, related to the center)
Heat Up Time	300°C: 30 min, 1300°C: 50 min
Cavity Features	Cavity Material: SiC Type: Cylinder with conical base Depth: 225 mm (front edge of radiator cover to cavity base)
Temperature Sensor	Type R Platinum Thermocouple PT13Rh
Controller	PID
Interface	RS-485 (optional USB adapter and software)
Dimensions	380 mm x 530 mm (15 in x 20.8 in) ... 545 mm (adjustable) x 500 mm (21.4 in x 19.7 in) (W x H x D)
Weight	approx. 37 kg (82 lbs)
Power Supply	220 to 240 V AC, maximum 3 kW

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