

BBS1050 AND BBS1200

COMPACT BLACKBODY CALIBRATION SOURCES



OVERVIEW

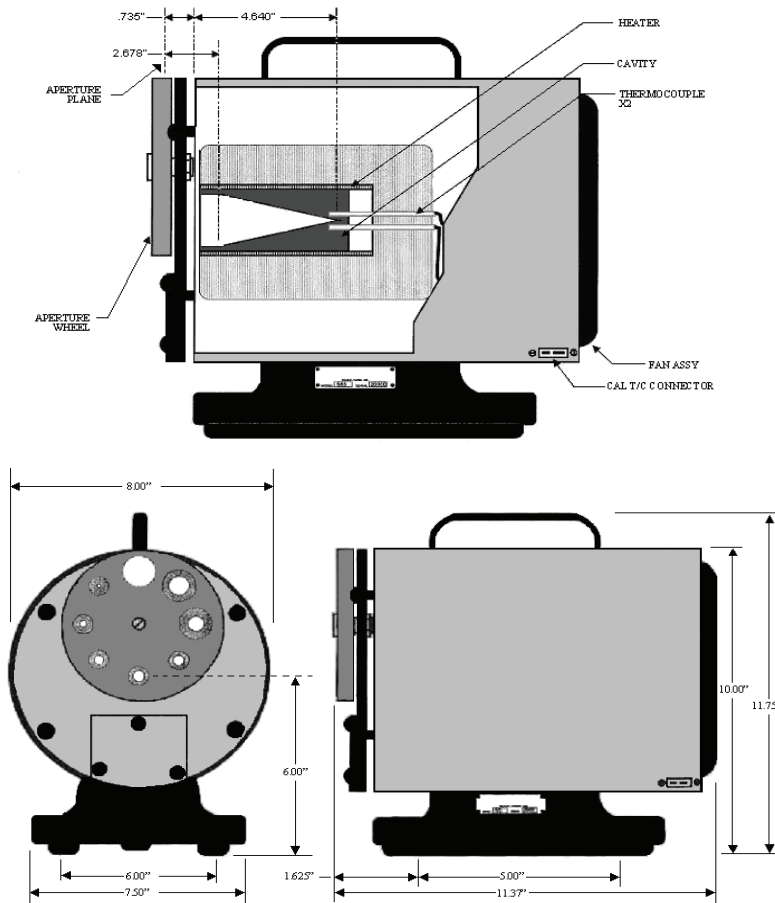
The BBS1050 and BBS1200 are compact, portable, high emissivity blackbody calibration radiance sources for precision calibration of infrared pyrometers, UFP detectors, thermal imaging cameras, heat flux meters and spectrometers. The ideal use for these blackbodies is collimators and automated test stations.

The BBS1050 and BBS1200 blackbody sources offer high accuracy (up to 1 inch aperture) using an 8-position aperture wheel. The BBS1050 and BBS1200 are designed for mid to high temperature applications (50 to 1200°C), making them ideal for field and laboratory use.

The 20 degree tapered, recessed cone, surface emissivity, and cavity aspect ratio combine to provide blackbody radiation by multiple reflections, absorption and re-emission of its thermal energy. The thermal radiation of the cavity is provided by a ceramic-sealed heater coil that uniformly heats the conical cavity.



BLACKBODY SOURCE DIMENSIONS



Dimensions in inches

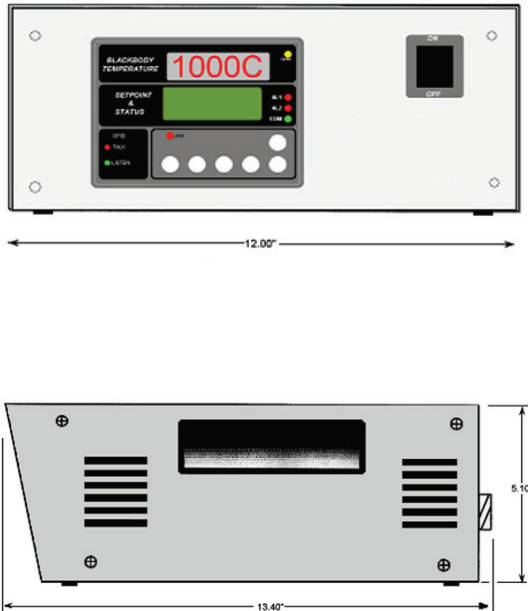
BBS1050 AND BBS1200 FEATURES

- High accuracy of $\pm 0.2^{\circ}\text{C}$ to NIST Standard
- Wide temperature ranges from 50° to 1200°C (122° to 2192°F)
- High emissivity >0.99
- Stability of $\pm 0.2^{\circ}\text{C}$
- Temperature resolution of 0.1°C
- High uniformity
- 8 position aperture wheel
- Fast slew rate $1000^{\circ}\text{C} < 45$ minutes
- Test thermocouple port
- Serial connection optional
- Digital self-tuning PID controller
- Reliable and durable in the field
- Portable, light weight

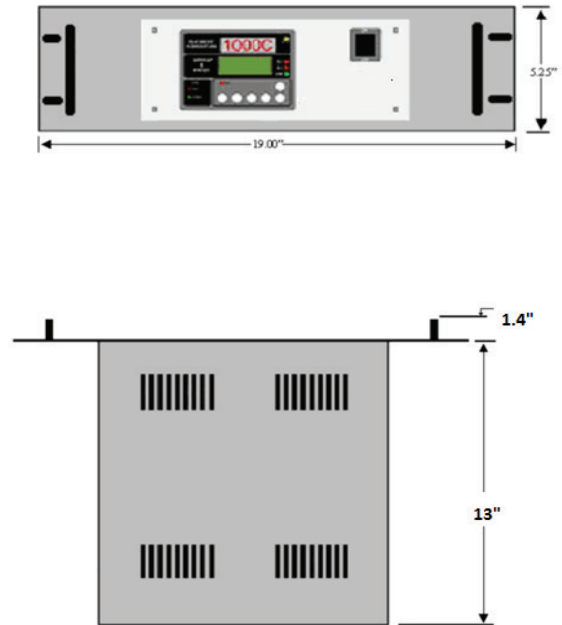


CONTROLLER ENCLOSURE DIMENSIONS

Bench Top Design



19" Rack Mount Design



SPECIFICATIONS

	BBS1050	BBS1200
Temperature Range	50° to 1050°C (122° to 1922°F)	50° to 1200°C (122° to 2192°F)
Accuracy	± 0.2°C to NIST Standard	
Temperature Resolution	0.1°C	
Stability Short/Long-Term	± 0.1°C / ± 0.2°C	
Variable Aperture Sizes (8)	1", 0.6", 0.4, 0.2, 0.1, 0.125, 0.050 and 0.025"	
Emissivity	> 0.99	
Cavity	Silicon Carbide Target Tube	
Heat-up Time	100 to 1000°C (212° to 1832°F) < 45 Minutes	100 to 1200°C (212° to 2192°F) < 70 Minutes
Temperature Sensors	Embedded 0.01% Matched Type S	
Method of Control	Digital Self-Tuning PID Controller	
Operating Temperature	0° to 50°C (32° to 122°F), Cooling: Fan Cooled	
Serial Communication	RS232, RS485 or IEEE-488/GPIB (Optional)	
Cable Length	8 feet (2.4 m)	
Power Requirement	90 - 125VAC or 208 - 240VAC (must select one), 50/60Hz, 550 W (BBS1050), 800 W max. (BBS1200)	
Power Cord	6 ft (1.82m)	
Source Dimensions	11.75" H x 11.4" D x 8" W (298 x 289 x 203mm)	
Controller Dimensions	5.1"H x 13.4"D x 12"W (130 x 340 x 304mm)	
Source Weight	17 lbs. (7.71 kg)	
Controller Case Weight	9 lbs. (4.08 kg)	

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