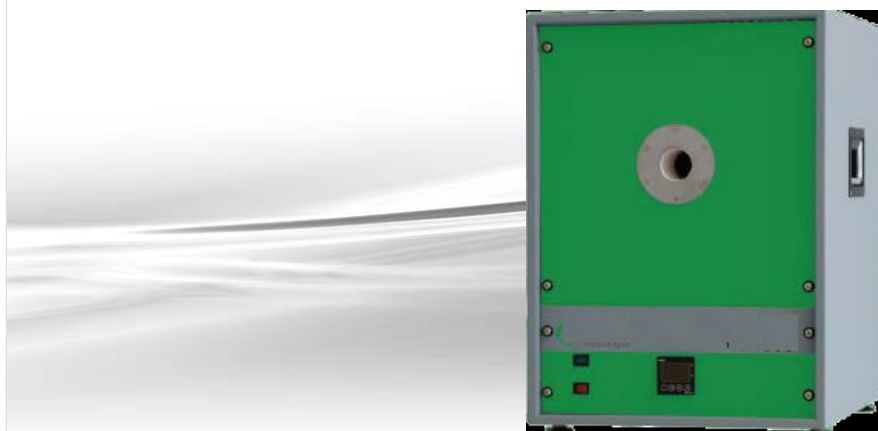


AST BB1500

Infrared calibration source/black body

Overview



Description

The infrared calibration source AST BB1500 is used for the calibration and verification of infrared radiation thermometers and infrared cameras within the temperature range from 300 °C to 1500 °C, especially in the near infrared range (NIR) at 0.8 µm to 1.8 µm wavelength. The cavity style guarantees a very high emissivity.

The temperature adjustment can be done directly at the black body or via serial interface RS-485 (optional USB adapter). Digital PID controller and high-precision temperature sensor provide excellent accuracy and stability.

Technical data

Type	AST BB1500
Temperature range	300 °C to 1500 °C
Aperture diameter	38 mm
Emissivity ¹	0.99 ± 0.005
Measurement uncertainty ^{1,2}	2 K + 0.0025 · T [°C]
Reproducibility ¹	0.5 K + 0.001 · T [°C]
Control stability	0.3 K
Display resolution	0.1 K
Temperature constancy ¹	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) Inner diameter: 45 mm
Temperature sensor	Type R Pt13Rh
Controller	PID
Interface	RS-485
Dimensions	380 mm × 530 ... 545 mm (adjustable) × 500 mm [W × H × D]
Weight	approx. 37 kg
Power supply	220 to 240 V AC, maximum 3 kW

¹ At 1.5 µm to 1.8 µm wavelength. ² For the range 500 °C to 1500 °C.