

PYROTHERM CS 1500/CS 1500E

Infrared calibration source/black body

Overview



Description

The infrared calibration source PYROTHERM CS 1500/CS 1500E is used for the calibration and verification of infrared radiation thermometers and infrared cameras within the temperature range from 300 °C to 1500 °C. 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) with PC software. Digital PID controller and high-precision temperature sensor provide excellent accuracy and stability.

Technical data

Type	PYROTHERM CS 1500	PYROTHERM CS 1500E
Temperature range	300 °C to 1500 °C	
Aperture diameter	38 mm	58 mm
Emissivity	0.99 ± 0.005 ¹	
Measurement uncertainty	2 K + 0,0025 · T [°C] ²	3 K + 0,003 · T [°C] ²
Reproducibility	0.5 K + 0.001 · T [°C]	
Control stability	0.3 K	
Display resolution	0.1 K	
Temperature constancy	0.3 K + 0.001 · T [°C] (for the central area Ø 20 mm, related to the center)	
Heat up time	300 °C: 20 min, 1300 °C: 40 min	
Cavity features	Material: SiC Variant: Cylinder with hemisphere end Depth: approx. 180 mm	
	Inner diameter: 45 mm	Inner diameter: 60 mm
Temperature sensor	Type R Pt13Rh	
Controller	PID	
Interface	RS-485 (optional USB adapter and software)	
Dimensions	38 cm × 52 cm/54 cm × 50 cm [W × H × D]	
Weight	approx. 37 kg	
Power supply	220 to 240 V AC, maximum 3 kW (110 to 120 V AC version on request)	

¹ Measured at 1.5 µm to 1.8 µm. ² For the range 500 °C to 1500 °C.