



Gemini R Medium-Temp. Blackbody Source

Model 976

The Gemini R comprises a blackbody with which medium temperature infrared thermometers can be calibrated.

The temperature of the cavity can be set to $\pm 0.1^\circ\text{C}$ over the temperature range 30°C to 550°C .

The temperature of the furnace is set on a controller, while an independent indicator, whose sensor fits into the cavity, indicates the actual radiance temperature. The sensor can be removed from the Blackbody and placed in a drywell or liquid bath for a complete system calibration.

The variation seen on the controller's temperature indication over a 5 minute period is less than $\pm 0.2^\circ\text{C}$. Similar variations can be detected by a radiation thermometer looking into the cavity.

Using a portable radiation thermometer having a target diameter of 13mm, the 65mm target was surveyed, radially. Maximum temperature differences of $\pm 1^\circ\text{C}$ were found for set temperatures in the range 100°C to 500°C .

Temperatures along the inner 100mm of the 160mm long cavity were measured at 400°C and 500°C , using a hand held fibre-optic radiation probe. Maximum temperature differences of $\pm 4^\circ\text{C}$ were found.

The temperature, as shown on the controller, agrees with the cavity temperature as measured by a radiation thermometer, where calibration is traceable to National Standards, to within $\pm 2^\circ\text{C}$.

Traceability may be established with a NIST certificate for the built-in indicator and supplied probe.

Now Includes
PC Interface and Cal NotePad
Windows Software

SPECIFICATIONS

Model	976
Temperature Range	30°C to 550°C
Accuracy	$\pm 2^\circ\text{C}$
Emissivity	Greater than 0.995
Stability	$\pm 0.2^\circ\text{C}$
Display Resolution	0.01°C to 99.99; 0.1°C from 100.0 to 550.0
Cavity Size	65mm diameter 160mm deep
Time to Temperature	45 minutes
Power	1000 Watts typical 110 VAC $\pm 10\%$
Dimensions	310mm x 265mm x 200mm (HxWxD)
Weight	22 lbs. (10kg)

ACCESSORIES

431-03-00	Gallium Hockey-Puck Cell
976-05-00A	Indium Hockey-Puck Cell
976-05-00B	Tin Hockey-Puck Cell
976-05-00C	Zinc Hockey-Puck Cell
935-14-72	Replacement Probe
931-22-27	Carrying Case
976-01-05	Set of 5 orifice plates to restrict cavity aperture diameter to 50mm, 40mm, 30mm, 20mm or 10mm.

HOW TO ORDER

976 Gemini R	Black Body Source
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Key Features

- Medium-Temperature Blackbody Source
- 65mm Cavity Diameter
- 0.995 Emissivity
- Portable
- Accepts Fixed-Point Cells

NEW!

Gemini R 700. Also available is a model with a maximum operating temperature of 700°C

— Ask for Details

