

Blackbody Source Gemini R

- 30°C to 550°C
- Emissivity > 0.995
- 65mm Diameter Cavity

The Gemini R 550 Portable Blackbody Calibration Source allows for calibration of noncontact infrared thermometers over the temperature range 30°C to 550°C.

It is suitable for use as a primary radiation source for infrared thermometers.

Laboratory performance and low uncertainty calibrations are ensured by the combination by high emissivity and excellent temperature uniformity.

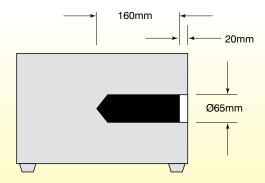
The digital temperature controller allows the block temperature to bet set to any value from 30°C to 550°C.

Traceability of the radiance temperature is established by a separate, built-in temperature indicator and included platinum resistance thermometer.

A three point traceable calibration certificate is included. UKAS calibration of the resistance thermometer is available, as is radiometric calibration.

Uniformity of the block is ensured by using distributed heating technology.

For the smallest of uncertainties the Gemini R may be used with Isotech ITS-90 Fixed Point Cells. Gallium 29.7646°C. Indium 156.5985°C, Tin 231.928°C and Zinc 419.527°C. The cells are provided with a certificate of metal purity.



Gemini R

■ Test Report

The variation seen on the controller's temperature indication over a 5 minute period was $\pm 0.2^{\circ}$ C. Similar variations were 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.

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 $\pm 2^{\circ}$ C.



Model

Temperature Range

Emissivity

Stability

Display Resolution

Heating Time Aperture Diameter

Cavity Depth

PC Interface

Power

Voltage

Dimensions

Weight

976

30°C to 550.0°C

Greater than 0.995

±0.1°C

0.01°C to 99.99;

0.1°C from 100 to 550

45 minutes

65mm

160mm

included

1000 Watts typical

100-130 or 208-240 Vac

50/60Hz

H 310mm W 265mm

D 200mm

10kg

Options

Fixed Point Cell

Gallium Hockey Puck Cell Indium Hockey Puck Cell Tin Hockey Puck Cell

Zinc Hockey Puck Cell Orifice Plates 10, 20, 30, 40, 50mm

Carrying Case

(Restricts Cavity Aperture)

431-03-00 976-05-00A 976-05-00B

976-05-00C 976-01-05

931-22-64

How To Order

Model 976 Gemini R

State Supply Voltage

Please state any special calibration requirement