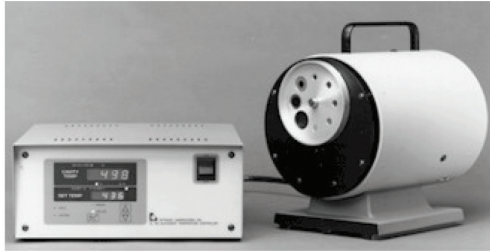


OL 480

Blackbody Calibration Standard



The **OL 480 Blackbody Calibration Standard** provides an accurate, high temperature (100° to 1200°C) source of infrared radiation. It is specifically designed for calibrating infrared radiometric and spectroradiometric measurement systems.

The blackbody features a unique, uniformly heated recessed cone cavity with an emissivity of 0.99 ± 0.01 . Accuracy of calibration is ensured by the use of a NIST-traceable platinum vs. platinum 10% rhodium thermocouple. An 8-position aperture wheel provides a convenient means of controlling the flux radiated by the blackbody (Table 1). The small aperture sizes enable the source to be used as a point source target at a finite working distance, while the larger apertures allow direct calibrations for radiance.

A convenient microprocessor-based, self-tuning digital PID controller holds the selected temperature to within $\pm 0.05\%$ of full scale. The controller has dual displays with the lower display indicating the desired set point and the upper display indicating the actual blackbody source temperature.

Design Features



- Digital Controller
- Direct Mount Modulators Available
- 16 Interval Ramp and Hold from Front Panel
- Two (2) Customer Configured Alarm Relays
- One (1) Year Warranty
- RS-232C/422A/485 or IEEE-488 (Optional)

SPECIFICATIONS

Source

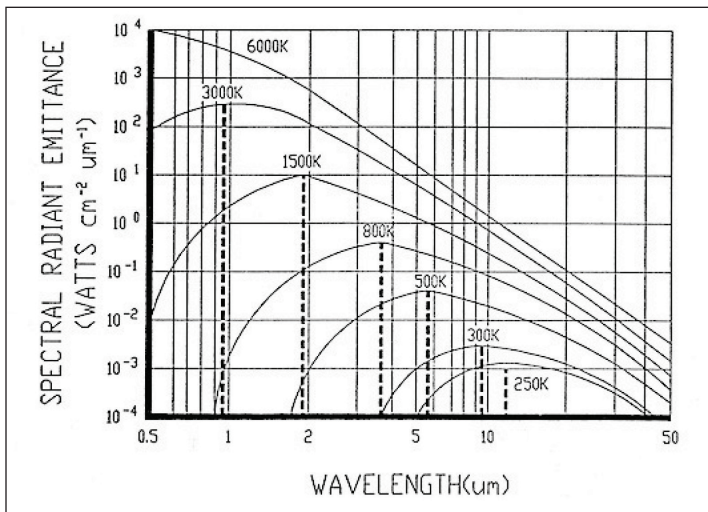
Temperature Range	50°C to 1200°C 50° to 1050°C (Optional)
Accuracy	$\pm 0.2\% \pm 1$ Digit
Resolution	0.1°C
Overall System Stability	$\pm 0.02\%$ of Full Scale Per 24 Hour Period
Cavity Opening	1.0" (25mm)
Cavity Type	Recessed 20° Cone
Emissivity	0.99 ± 0.01
Sensing Element	Type S Thermocouple Platinum/Platinum -10% Rhodium Special 0.01% Tolerance, Matched to Sensing T/C
Max. Aperture Temp Rise	30°C
Max. Housing Temp Rise	20°C
Dimensions	11.75" x 8" x 11.4" (29.85 cm x 20.32 cm x 28.96 cm)
Net Weight	17 lbs. (7.71 kg)
Control Module	
Dimensions	5.1" X 12" X 13.4" (12.95 cm x 30.48 cm x 34.04 cm)
Net Weight	9 lbs. (4.08 kg)
Warm-Up time (Ambient to 1200°C)	50 Minutes
Operating temperature	0 - 50°C
Controller	Digital Auto-Tune PID
Cooling	Fan Cooled

Data Sheet: B104 Dec 2020 | Rev A

As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.

TABLE 1 APERTURE SIZES	
Inches	Millimeters
1.000*	25.40*
0.600	15.2
0.400	10.2
0.200	5.1
0.100	2.5
0.050	1.3
0.025	0.6
0.0125	0.4

*Cavity Opening



Blackbody Spectral Radiant Emittance At Various Temperatures