IR-564 and IR-563
Cavity Blackbody Reference Sources

FEATURES

- Digital Controller
- Direct Mount Modulators Available
- 16 Internal Ramp to and Hold from Front Panel
- Two (2) Customer Configured Alarm Relays
- RS-232C/422A/485 or IEEE-488 (optional)
- Ice Bath Reference Probes (optional)

DESCRIPTION

The IR-560 Series blackbody reference sources are designed to provide infrared radiation as an ideal blackbody emitter. The output energy from the 1.0” cavity closely follows the theoretical maximum energy curve described by Max Planck's equation, and allows users to calibrate, align, and measure infrared devices and phenomena of all types. Using the integral aperture wheel, the infrared flux can be varied by known amounts without disturbing critical optical setups, and combining apertures and distance changes, the flux at any point can easily be determined. The IR-563 and IR-564 are ideal sources for the Near (1-3 um), Mid (3-8) and Far (8-30+ um) infrared bands. The IR-563 has been the industry standard 1000º C blackbody for more than 30 years, and continues to provide excellent service to infrared applications throughout the industry. The IR-564 extends the temperature range of the IR-563 to 1200º C by changing cavity materials to Silicon Carbide and high purity Alumina ceramics; otherwise the two units are virtually identical.

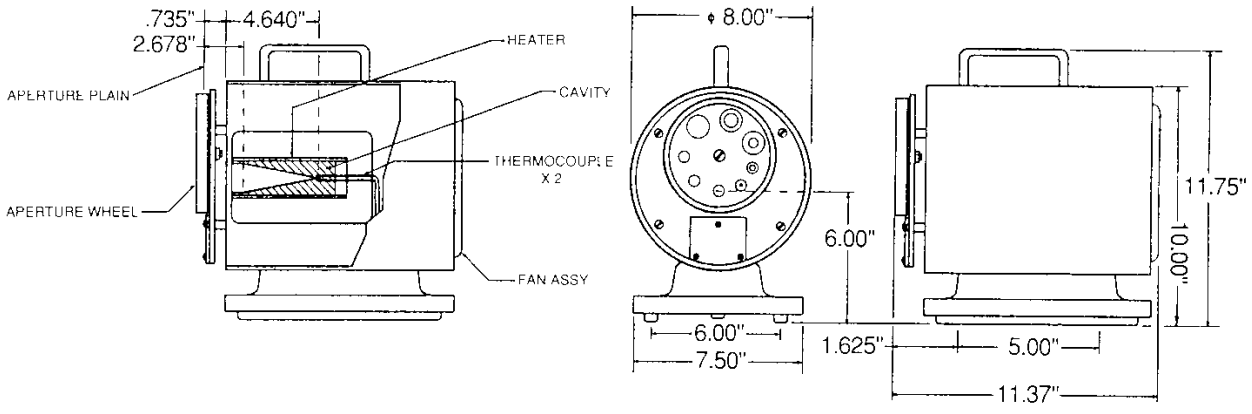
Boston Electronics Corporation, 91 Boylston Street, Brookline MA 02445
(800)347-5445 or (617)566-3821 * fax (617)731-0935 * boselec@boselec.com * www.boselec.com

The 20º tapered - recessed - cone, surface emissivity, and cavity aspect ratio combine to provide blackbody radiation by multiple reflection, absorption and re-emission of its thermal energy. The thermal energy of the cavity is provided by a ceramic-sealed heater coil that uniformly heats the cavity cylinder to temperatures from 50º C to 1200º. The IR-563 system carries a full, two-year warranty due to the reliability of actual field units used over the last 30 years; the IR-564 is covered by a one-year warranty.

SPECIFICATIONS

	IR-563	IR-564
Temperature Range	50°C to 1050°C	50°C to 1200°C
Accuracy	+/- .05% of full scale +/- 1 digit	
Setability	1°C	
Stability	+/- .1% of full scale per 24 hour period	
Type of Control	P.I.D.	
Sensing Element	Type S, Platinum/Platinum – 10% Rhodium	
Calibration Thermocouple (STD)	Same as above (matched) +/- .1% accuracy	
Cavity Emissivity	0.99 +/1 0.01	
Cavity Type	Recessed 20° cone	
Aperture Wheel Assemblies	Standard	
Aperture Diameter	0.600 – 0.400 – 0.200 – 0.100 – 0.050 – 0.025 – 0.0125” (.500 avail.)	
Max. Aperture Temp. Rise	20°C	30°C
Max. Housing Temp. Rise	15°C	20°C
Cavity Opening	1” diameter	
Warmup Time	35 minutes amb. to 1050°C	50 minutes amb. to 1200°C
Dimensions (Source)	11.75 x 8 x 11.4”	
Net Weight	17 lbs.	
Shipping Weight	19.5 lbs.	
Power Req. (110-120VAC, 50/60Hz, 1 phase)	5.0 amp max.	
	220VAC option available (installed internally)	

IR-563 AND IR-564 OUTLINE DRAWING



Boston Electronics Corporation, 91 Boylston Street, Brookline MA 02445
(800)347-5445 or (617)566-3821 * fax (617)731-0935 * boselec@boselec.com * www.boselec.com