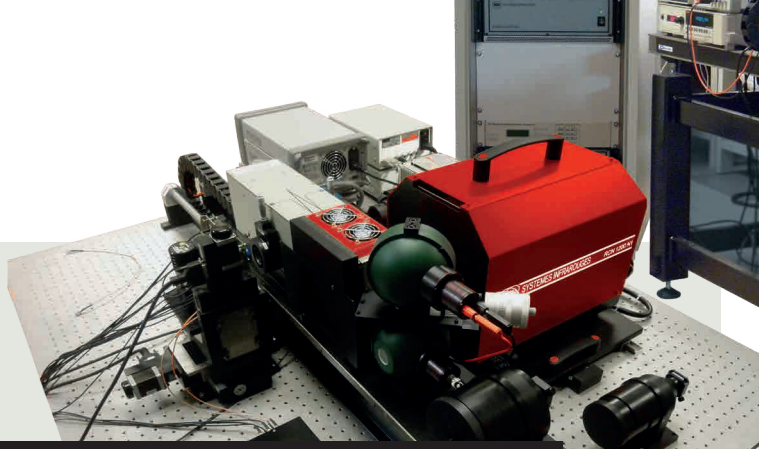
RCN series



→ Wide spectrum reference source

RCN series

HIGH TEMPERATURE | **CAVITY BLACKBODIES**

THE WIDEST RANGE OF HIGH END CAVITY SOURCES

The RCN series high temperature cavity blackbodies are reference sources covering a wide range of wavelengths, from visible to far IR. They consist of a compact emissive head controlled via an electronic unit. A user-friendly touch screen control panel located on the front of the electronic unit allows precise temperature selection and stabilization thanks to a real time PID parameters adjustment. The cavity structure leads to **incomparable uniformity and emissivity**.

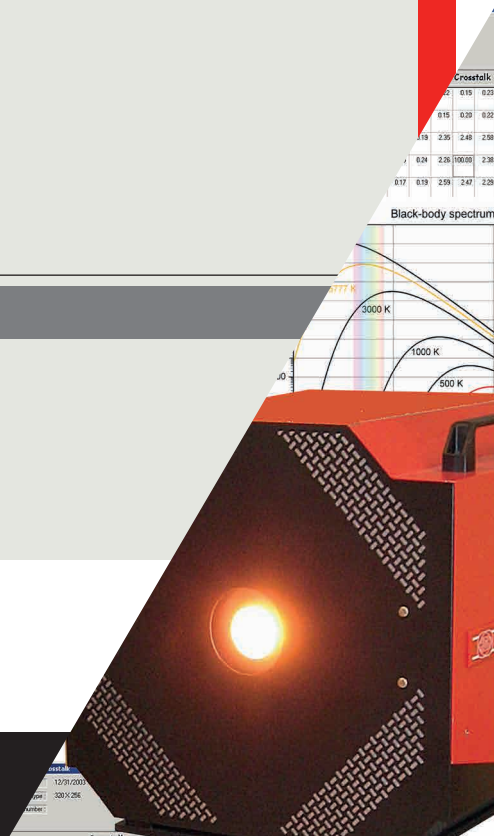
The applications of these large spectral reference sources are for calibration of near-IR and IR sensors such as thermal imagers, pyrometers, SWIR to LWIR cameras, sample emissivity or transmission measurement, reference source for atmospheric spectral transmission measurement, etc.

THE HIGHEST UNIFORMITY OVER THE LARGEST APERTURES

- High temperature reference source up to 1350 °C
- Optimized cavity shape ensuring high spatial and angular uniformity and emissivity
- Aperture diameter up to 50 mm
- Real time display of temperature data and intuitive interface
- Aperture / filter wheel
- Overall design ensuring total safety of the operator
- Control through touchscreen panel
- Remote control via Ethernet link, RS 232, IEEE, WiFi
- Built In Test Equipment (BITE)
- Supplied with individual certificate of radiometric calibration, over multiple bandwidths
- INFRATEST LT control software

OPTIONS

- Exclusive CoolSpeed function
- Motorised aperture wheel
- Optical chopper or shutter in addition to aperture wheel
- External temperature sensor for independent cavity temperature calibration
- LabVIEW driver



NATIONAL INSTRUMENTS LabVIEW

OPTIONS

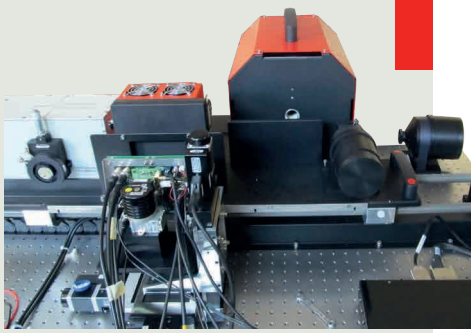
- LabVIEW drivers for all communication interfaces

RCN series

HIGH TEMPERATURE | **CAVITY BLACKBODIES**

→ RCN1250 N1

→ RCN series



→ Test of IRFPA with reference sources

TECHNICAL DATA

	RCN600 N05	RCN1250 N1	RCN1350 N1	RCN1050 N2	RCN1250 N2
Aperture diameter	12.5 mm	25 mm		50 mm	50 mm
Temperature range	50°C to 600°C	50°C to 1250°C	50°C to 1350°C	50°C to 1050°C	50°C to 1250°C
Cavity uniformity	2°C at 600°C	2°C at 900°C over 25mm		4°C at 900°C over 38mm	
Aperture / filter wheel	N.A.	12 position manual		N.A.	
Emissivity / Apparent emissivity after calibration	> 0.98 / 1.00	> 0.99 / 1.00		> 0.98 / 1.00	
Stability at max. temperature	0.1°C				
Temperature (T) sensor accuracy	± 1.5°C up to 375°C ± 0.4% T above	± 1.5°C up to 600°C ± 0.25% T above			
Display resolution	0.01°C				
Warm up time from ambient to max. T°C	20 min.	75 min.			
Head Dimensions W x H x D (mm^3)	160 x 137 x 170	283 x 300 x 405			
Head weight	3 kg	16 kg			
Electronic unit size	**2U x 19"**				
Electronic unit weight	8 kg				
Maximum power consumption	1800 W				
Power supply	90/260 VAC, 1 ph., 50/60 Hz				
Remote control	Ethernet, RS232 and IEEE488				

COOLSPEED TECHNOLOGY

The N1 and N2 models come in option with the **COOLSPEED** technology. Based on an innovative internal structure, CoolSpeed cuts in half the cooling duration of cavity blackbodies, without altering its technical features such as high emissivity, high speed warm up and high stability. With an average cooling rate of **-6°C/min.**, from 1200°C to ambient, and a maximum rate of **-12°C/min.** at 700°C, CoolSpeed brings high flexibility to users, especially in the context of Research and Development projects and production lines.

Above information is subject to changes without notice

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