

→ Infrared validation test equipment



ECN100 series

HIGH TEMPERATURE

EXTENDED AREA BLACKBODY

THE HIGHEST UNIFORMITY, CERTIFIED BY ACCEPTANCE TEST REPORT

The ECN100 blackbodies are extended area reference sources covering a wide range of wavelengths, from near IR to far IR. The ECN100 series provide infrared radiation with an unparalleled emissivity, uniformity and stability for the test and calibration of NIR to LWIR sensors with the highest accuracy.

Each ECN100 is delivered with a traceable certificate of compliance, including the actual thermal uniformity measurement over the full emissive surface. These data ensure high accuracy for:

- · the calibration of thermal imagers over their full field of view
- the non-uniformity correction of infrared cameras
- · the simultaneous test of several sensors during manufacturing
- the measurement of the size of source effect on cameras

In addition, they can be used as reference sources for sample emissivity or transmission measurement, as real size infrared targets, or as large spectral bandwidth reference sources.

The robust structure of the emissive head enables lab or field condition operation. Additionally, the external mechanical parts are maintained to temperatures below 50°C, thus preserving safe operation.



THE HIGHEST EMISSIVITY OVER LARGE EMISSIVE AREA, UP TO 1 m²

- Temperature range from ambient to +600°C
- Exceptionally high emissivity of 0.98 \pm 0.02
- · Supplied with individual certificate of radiometric calibration over multiple bandwidths
- Large emissive area up to 1m² with high uniformity
- Real-time display of surface and set point temperature
- Control through touchscreen panel
- Remote control via Ethernet link, RS232, IEEE488, WiFi
- Built In Test Equipment (BITE)
- INFRATEST LT control software



OPTIONS

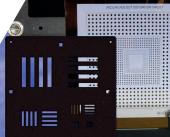
- LabVIEW drivers
- Specific target patterns

• Cold mask for ECN100 H6 (adaptation to collimator aperture / emissivity enhancement)



OPTIONS

· LabVIEW drivers for all communication interfaces



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TECHNICAL DATA ➤

ECN100





→ ECN 100 N40

ECN100

→ ECN 100 H6 and MTF target

ECN100

	Н6	H12	N20	N40 (1)
Emissive area	150 x 150 mm ²	300 x 300 mm ²	500 x 500 mm ²	1000 x 1000 mm ²
Temperature range	50°C to 600°C	50°C to 550°C	50°C to 300°C	Ambiant +5°C (1) to 100°C
Emissive area uniformity (2)	0.75 °C at 300 °C	2 °C at 300 °C	3.5 °C at 300 °C	1°Cat 100°C
Emissivity / Apparent emissivity after calibration	minimum 0.96 over 8 - 14 μm / 1.00 Average 0.91 ± over 3.5 μm / 1.00		0.98 ±0.02 / 1.00	
Stability	0.02°C		0.05°C	0.01°C
Temperature measurement accuracy	± 0.5°C			± 2.5°C
Display resolution	0.01°C			0.1°C
Warm-up time from ambient to Tmax	50 min		60 min	30 min
Head dimensions W x H x D (mm³)	423 x 467 x 247	567 x 677 x 340	694 x 820 x 300	1470 x 1260 x 700
Head weight	20 kg	40 kg	55 kg	210 kg
Electronic unit size	2U x 19"			

5000 W

-10°C to +70°C

(1): Differential mode available on ECN100 N40

(2): Thermal map supplied

Electronic unit weight

Max. power consumption

Power supply

Remote control

Operating temperature

range (head)

Above information is subject to change without notice

+5°C to +70°C



Headquarters

2500 W

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6,5 kg

200-260 VAC, 1 ph. 50/60 Hz

Ethernet, RS-232, IEEE 488

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