→ 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 process
- 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. Besides, the external mechanical parts are maintained to temperatures below 50°C, thus preserving safe operation.

→ **ECN 100**
Extended area blackbody

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

- Temperature range from ambient to +600 °C
- Exceptionally high emissivity of 0.98 ± 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

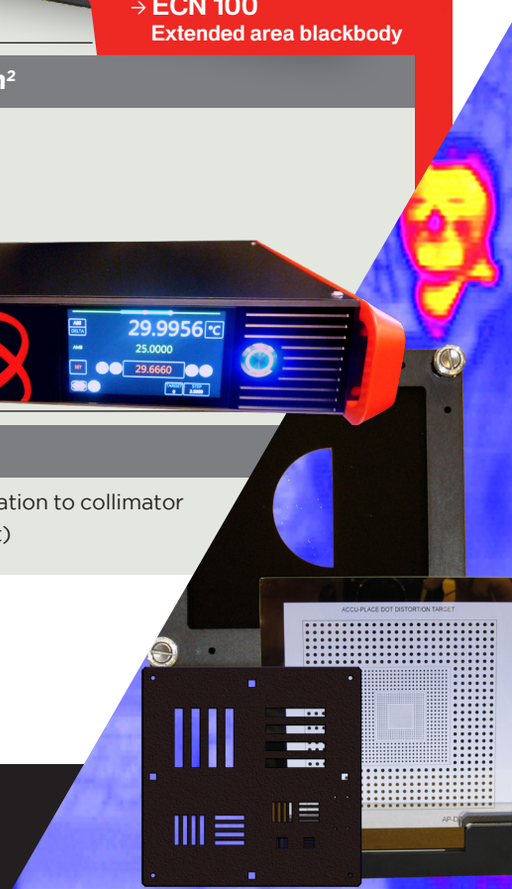
OPTIONS

- LabVIEW drivers
- Specific target patterns
- Cold mask for ECN100 H6 (adaptation to collimator aperture / emissivity enhancement)

NATIONAL INSTRUMENTS LabVIEW

OPTIONS

- LabVIEW drivers for all communication interfaces



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ECN100 series

HIGH TEMPERATURE | EXTENDED AREA BLACKBODY

→ ECN 100 H6 & N20

→ ECN 100 N40

→ ECN 100 H6 and MTF target

TECHNICAL DATA

	ECN100 H6	ECN100 H12	ECN100 N20	ECN100 N40 (1)
Emissive area	150 x 150 mm²	300 x 300 mm²	500 x 500 mm²	1000 x 1000 mm²
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	0.98 ±0.02 over 8 - 14 µm / 1.00 0.96 ±0.02 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	45 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"			
Electronic unit weight	6,5 kg			
Max. power consumption	2500 W	5000 W	6000 W	
Power supply	115/230 VAC, 1 ph. 50/60 Hz			
Remote control	Ethernet, RS-232, IEEE 488			
Operating temperature range (head)	-10°C to +70°C			+5°C to +70°C

(1): Differential mode available on ECN100 N40

(2): Thermal map supplied

Above information is subject to change without notice

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