

LES100 SERIES EXTENDED AREA SOURCES

The **LES100 Series** are the industry standard for extended area infrared radiation sources with a maximum absolute temperature of 95°C. The fast slew rates, high stability, uniformity and emissivity of the LES100 Series sources make them an ideal choice for IR imaging system testing requirements.

Fast slew rates and exceptional stability are the result of EOI's 35 years of blackbody/controller design experience. The temperature controller utilizes a proprietary Proportional Integral Derivative (PID) control loop to provide fast setting times, zero set point drift and excellent temperature stability. The LES100 Series features a setpoint resolution of 0.001°C. This exceptional stability is unmatched in the industry.

High Accuracy in the displayed temperature reading is assured with the use of extremely stable probes and high resolution, precision processing electronics.

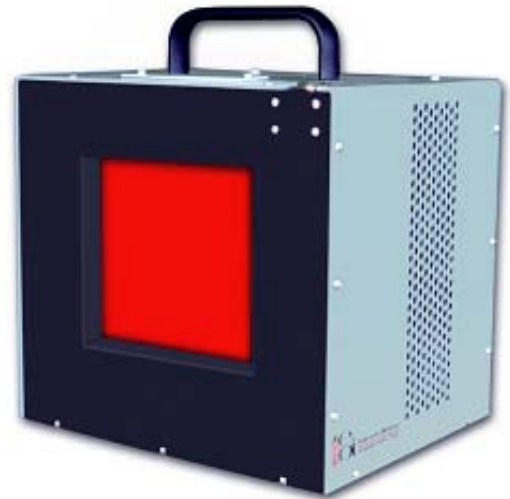
Emitting surface sizes range from 2 × 2 inch (51mm×51mm) to 12 × 12 inch (305mm × 305mm). Custom sizes are also available upon request.

Both IEEE-488 and RS232 Serial Interfaces are included as standard equipment with the LES100 Series controller, not offered as an additional cost option, allowing greater flexibility for integration into automated test systems.

A user-friendly menu system, accessed with a keypad on the front panel of the controller, allows for easy configuration and operation of the LES100 Series system.



Calibration of an LES100 Series source is a quick and easy procedure using the front panel keypad and is traceable to the National Institute of Standards Technology (**NIST**). The calibration procedure may be easily automated using EOI's Calsof99 calibration software, a model LT100 thermometer and a computer with a GPIB interface. The recommended calibration cycle for the LES100 Series is six months.



The LES100 Series Sources are suitable for laboratory or field use and feature:

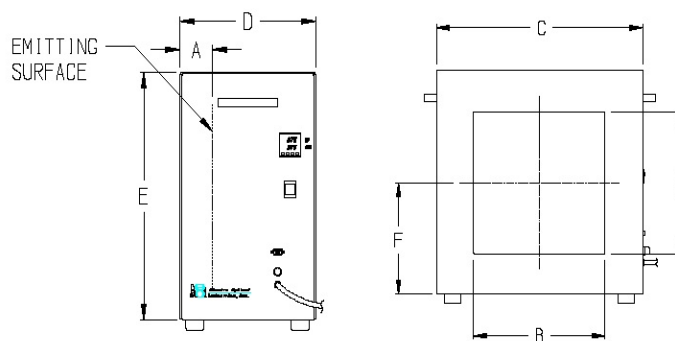
- ◆ **Fast Slew Rates**
- ◆ **Exceptional Stability and High Accuracy**
- ◆ **Many Standard Sizes**
- ◆ **Two Computer Interfaces**
- ◆ **2 Year Warranty**

LES100 Series extended-area sources are available in stand-alone configurations or integrated into any of EOI's Target Projectors, Simulators and Automatic Test Stations.

Available Options

- ◆ Remote controlled shutter
- ◆ Extended ambient range operation
- ◆ Extended low end
- ◆ Micro-Groove surface





Source Dimension in Inches (mm)

Model	Depth to Emitting Surface A	Emitting Surface B	Case Width C	Case Depth D	Case Height E	Optical Centerline F
LES100-02	0.4 (10)	2.0 (51)	3.6 (91)	5.8 (147)	4.6 (117)	2.7 (69)
LES100-04	1.1 (28)	4.0 (102)	8.1 (206)	6.8 (173)	7.6 (193)	4.0 (102)
LES100-06	1.0 (25)	6.0 (152)	10.9 (277)	6.8 (173)	12.7 (323)	7.2 (183)
LES100-08	1.1 (28)	8.0 (203)	12.1 (307)	8.7 (221)	11.1 (282)	6.0 (152)
LES100-10	1.0 (25)	10.0 (254)	13.1 (333)	7.2 (183)	13.6 (345)	7.0 (178)
LES100-12	1.2 (31)	12.0 (305)	14.9 (378)	8.7 (221)	15.1 (384)	7.8 (198)

Specifications

Temperature Range	5° to 95°C
Temperature Accuracy	±0.015°C from 5° to 95°C
Stability	±0.001° C from 0° to 75°C ±0.002°C from 75° to 95°C
Uniformity	±0.01°C within ±5°C of ambient temperature ±0.3% thereafter
Slew Rate including Settling Time to 0.01/ C	<70 sec for a 10°C temp change
Emissivity	0.97 ± 0.02, 2μ to 20μ With Micro-Groove 0.99 ± 0.004
Set Point Resolution	0.001°C
Display Resolution	0.01° or 0.001°C
Cable length	8 feet standard, others available
Controller Size*	5.25" H x 19" W x 18" D (rack mount)
Line Voltage*	100,120,220 or 240 VAC ± 10% (switch selectable), 50/60 Hz

*Larger systems require 220V or 240V and may require a 7" high controller or a power amplifier in addition to the temperature controller.

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