

CES100/CFC/MG SERIES EXTENDED AREA SOURCES

The **CES100/CFC/MG Series** are the industry standard for extended area infrared radiation sources with a maximum absolute temperature of 100°C. The fast slew rates, high stability, uniformity and emissivity of the *CES100 Series* sources make them the ideal choice for most IR imaging system testing requirements. The stability and uniformity of these sources is surpassed only by EOI's *LES100 Series* sources. If your test requirements exceed 100°C, refer to EOI's *CES200 Series* for source temperatures up to 200°C.

Fast slew rates and high 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 settling times, zero set point drift and excellent temperature stability.

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

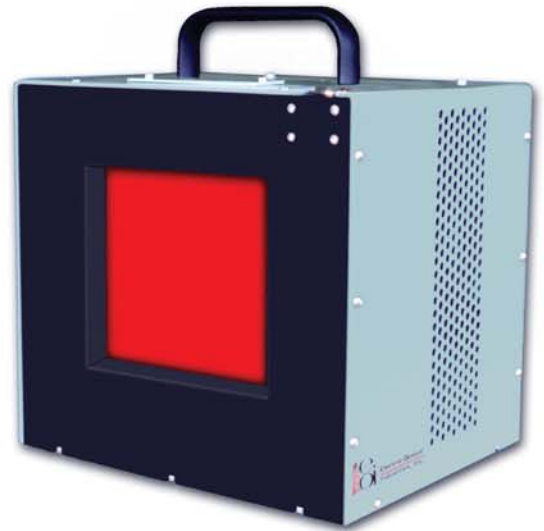
Emitting surface sizes range from 2 × 2 inch (51 × 51 mm) to 24 × 24 inch (610 × 610 mm). Custom sizes are also available upon request.

Both IEEE-488 and RS232 Serial Interfaces are included as standard equipment with the *CES100 Series* controller, 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 *CES100 Series* system.



Calibration of a *CES100 Series* source is a quick and easy procedure using the front panel keypad and is traceable to the National Institute of Standards and 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 *CES100 Series* is six months.



The CES100 Series Sources are suitable for laboratory or field use and features:

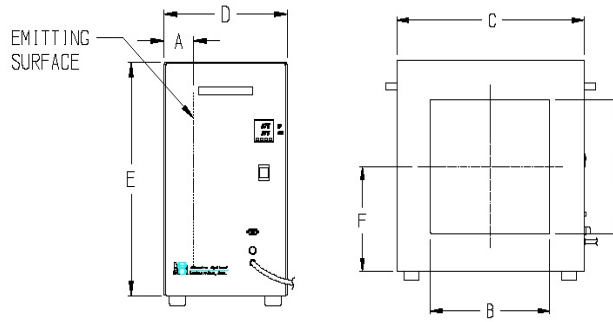
- ◆ **Fast Slew Rates**
- ◆ **High Stability and Accuracy**
- ◆ **Many Standard Sizes**
- ◆ **Two Computer Interfaces**
- ◆ **2 Year Warranty**

CES100 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 - CFC
- ◆ MicroGroove - MG for enhanced Emissivity





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
CES100-02	0.4 (10)	2.0 (51)	3.6 (91)	5.8 (147)	4.6 (117)	2.7 (69)
CES100-04	1.1 (28)	4.0 (102)	8.1 (206)	6.8 (173)	7.6 (193)	4.0 (102)
CES100-06	1.0 (25)	6.0 (152)	10.9 (277)	6.8 (173)	12.7 (323)	7.2 (183)
CES100-08	1.1 (28)	8.0 (203)	12.1 (307)	8.7 (221)	11.1 (282)	6.0 (152)
CES100-10	1.0 (25)	10.0 (254)	13.1 (333)	7.2 (183)	13.6 (345)	7.0 (178)
CES100-12	1.2 (31)	12.0 (305)	14.9 (378)	8.7 (221)	15.1 (384)	7.8 (198)
CES100-14	1.2 (31)	14.0 (356)	16.1 (409)	8.0 (203)	16.6 (422)	8.5 (216)
CES100-24*	1.2 (31)	24.0 (610)	29.0 (737)	6.3 (160)	29.0 (737)	14.5 (368)

Specifications

Temperature Range	-50° to 100°C
Temperature Accuracy	±0.03°C from 0° to 100°C
Stability	±0.003°C Short Term ±0.01°C Long Term
Uniformity	±0.01°C within ±5°C of ambient temperature ±0.3% thereafter
Slew Rate including Settling Time to 0.01°C	0.1°C: 20 sec, 1.0°C: 40 sec, 10°C: 80 sec
Emissivity with MG	0.992 (σ=0.0015), (2 to 20μm)
Set Point Resolution	0.01°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

* Specifications differ slightly from table shown. Contact EOI for more information.

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