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Data Sheet

August 15, 2026

CI SYSTEMS

CI Systems SR800R-4D Extended Area Blackbody ControlMaster

The CI Systems SR800R-4D ControlMaster is an extended area blackbody controller designed for precise temperature control and calibration of infrared detectors and systems. It provides highly accurate and uniform thermal radiation for testing and calibration purposes.



MODEL

**CI Systems
SR800R-4D**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

SR800R-4D

LISTING

<https://aumictechlabs.com/products/sr800r-4d-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The CI Systems SR800R-4D ControlMaster is an extended area blackbody controller engineered for precise temperature regulation and infrared detector calibration. It delivers highly accurate, uniform thermal radiation across 2 μ m to 14 μ m wavelengths with NIST-traceable performance. The system operates standalone or integrates into larger test benches, featuring onboard temperature measurement and digital signal transfer to the controller for enhanced stability and measurement confidence. Technical Specifications Temperature Range: -40°C to 1200°C Temperature Accuracy: 0.007°C; total system uncertainty 0.02°C ($T \leq \pm 25^\circ\text{C}$) and 0.03°C ($T > \pm 25^\circ\text{C}$) Temperature Stability: Millidegree-Kelvin stability Typical Yearly Drift: 0.02°C Set Point and Readout Resolution: 0.001°C Spectral Emissivity: Greater than 97% (2 μ m to 14 μ m) Emitter Diameter Options: 2" to 20" standard; up to 40" available Key Features User-replaceable sensors

allow rapid recalibration and system refresh to factory calibration within one year Optional CK-800R calibration kit enables self-calibration in the field Millidegree-Kelvin resolution for demanding metrology applications Large color LCD touchscreen interface with Windows CE operating system Control of up to four motorized devices from single controller Built-in MRTD testing and maintenance diagnostics reduce downtime Compact, portable form factor with included 19" rack-mount kit Ethernet, GPIB, and RS-232 communication ports for system integration Remote control software included Certified to MIL-T-28800D, CE, and FCC standards Typical Applications Infrared detector and thermal imaging system calibration NIST-traceable temperature reference for test facilities Thermal performance validation and detector characterization Extended-area radiometric measurement standards Compatibility & Integration Designed as a standalone unit or for integration into optical test benches with collimators and larger automated test systems. Removable radiation head design supports flexible deployment across multiple test configurations.

SR800R4D Characteristics / Specifications

PARAMETER	VALUE
Model	SR800R-4D
Instrument Type	Extended area blackbody with ControlMaster
Family	CI Systems SR-800 / SR-800N
Emitter Size	4 in x 4 in
Absolute Temperature Range	0 to 125 C (4×4 family row)
Differential Temperature Range	minus 25 to plus 100 C
Uniformity 4x	plus or minus 0.010 C family row
Set Point Resolution	0.001 C
Absolute Accuracy Midband	0.007 C at 0 C less than T less than 50 C
Absolute Accuracy Outside	0.015 C at T less than 0 C or T greater than 50 C
Differential Accuracy	0.008 C when abs(dT) less than or equal to 25 C; 0.015 C when abs(dT) greater than 25 C
Stability Small Dt	plus or minus 0.003 C when abs(dT) less than or equal to 10 C
Stability Large Dt	plus or minus 0.008 C when abs(dT) greater than 10 C
Emissivity	0.98 plus or minus 0.02 (family); 0.98 plus or minus 0.01 on some SR-800N sheets
Settling Time Class	15 s at 0.01 C on one family sheet; 30 s on another
Power Consumption 4x	200 W
Head Size 4×4 Class	about 20 × 16 × 16 cm
Head Weight 4×4 Class	about 5 kg
Controller Size	3U class about 35 × 31 × 14 cm (342×310×133 mm on one sheet)
Controller Weight	about 10 kg
Operating Voltage	95 to 240 VAC, 50/60 Hz
Head Operating Temperature	minus 20 to plus 70 C
Controller Operating Temperature	0 to 50 C
Storage Temperature	minus 20 to plus 70 C

PARAMETER	VALUE
Communications	Ethernet and RS-232; GPIB overlay on some controllers
Manufacturer	CI Systems
Literature	CI Systems SR-800N Extended Area Blackbody ControlMaster specification table (4×4 / 4D row)
Calibration	NIST-traceable; field-replaceable sensors
Operating temperature	minus 20 to plus 70 C

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 20 to plus 70 C
Operating temperature	minus 20 to plus 70 C
Operating Temperature	minus 20 to plus 70 C
Controller Operating Temperature	0 to 50 C
Communications	Ethernet and RS-232; GPIB overlay on some controllers
Manufacturer	CI Systems
Literature	CI Systems SR-800N Extended Area Blackbody ControlMaster specification table (4×4 / 4D row)
Calibration	NIST-traceable; field-replaceable sensors Notes From CI Systems SR-800N family table (4×4 emitter, 0-125 C absolute, minus 25 to plus 100 C differential, 0.007/0.015 C accuracy, 200 W). SR800R-4D is the 4×4 differential ControlMaster SKU; HT/LT overlays use different ranges and must not be copied here.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Model	SR800R-4D
Instrument Type	Extended area blackbody with ControlMaster
Family	CI Systems SR-800 / SR-800N
Emitter Size	4 in x 4 in
Absolute Temperature Range	0 to 125 C (4x4 family row)
Differential Temperature Range	minus 25 to plus 100 C
Uniformity 4x4	plus or minus 0.010 C family row
Set Point Resolution	0.001 C
Absolute Accuracy Midband	0.007 C at 0 C less thanTless than 50 C
Absolute Accuracy Outside	0.015 C atTless than 0 C orTgreater than 50 C
Differential Accuracy	0.008 C when abs(dT) less than or equal to 25 C; 0.015 C when abs(dT) greater than 25 C
Stability Small Dt	plus or minus 0.003 C when abs(dT) less than or equal to 10 C
Stability Large Dt	plus or minus 0.008 C when abs(dT) greater than 10 C
Emissivity	0.98 plus or minus 0.02 (family); 0.98 plus or minus 0.01 on some SR-800N sheets
Settling Time Class	15 s at 0.01 C on one family sheet; 30 s on another
Power Consumption 4x4	200 W
Head Size 4x4 Class	about 20 x 16 x 16 cm
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PARAMETER	VALUE
Manufacturer	CI Systems
Literature	CI Systems SR-800N Extended Area Blackbody ControlMaster specification table (4x4 / 4D row)
Calibration	NIST-traceable; field-replaceable sensors

Notes

From CI Systems SR-800N family table (4x4 emitter, 0-125 C absolute, minus 25 to plus 100 C differential, 0.007/0.015 C accuracy, 200 W). SR800R-4D is the 4x4 differential ControlMaster SKU; HT/LT overlays use different ranges and must not be copied here.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.