

Lasair® II-110

Particle Counter



The Lasair® II-110 is the first laser diode 1.0 CFM unit with the ability to count 0.1 μm particles. With a comprehensive set of features and unequalled accuracy, the Lasair II-110 offers reduced operating costs and the reliability and longevity to support its three-year laser warranty.

FEATURES

- Diode laser
- 6 sizing channels from 0.1 – 5.0 μm
- Saves up to 3,000 samples for review, sorting, data filtering, and printing
- USB data download to flash memory key
- Built-in thermal printer
- Large, color LCD display for better visibility
- Quiet carbon-free blower/pump for portable applications; filtered pump and chamber air outputs
- Internal critical orifice configurations for manifold applications
- Integrates up to 6 environmental sensors
- Optional high-efficiency exhaust filter for ISO Class 1 – 4
- Optional battery/charger for 8 hours continuous mobile use

APPLICATIONS

- Cleanroom and minienvironment monitoring
- High-sensitivity applications
- Facility certification to ISO, FS, or British Standards
- Troubleshooting/mobile applications
- Manifold sampling (with Aerosol Manifold II)
- Process gas monitoring (with High Pressure Diffuser)
- Ultraclean zones (ISO 1–2)



BENEFITS

Reduce Defects

- Real-time measurement of yield-impacting particles
- Use as mobile counter to localize source of particles
- Elimination of traditional undercounting errors in manifold sampling
- Full range of accessories for monitoring in different applications
- Actual detection of 0.1 μm particles

Increase Productivity

- Saving/reloading recipes reduces time to certify cleanroom
- Control cleanroom monitoring from your office PC via web browser: set-up, sample, display, print, download data, and upload sample recipes
- Quiet operation improves work environment
- Calculations and reports for ISO, FS, or British Standards
- Interfaces with Facility Net software for comprehensive data management
- Speedy data download to Excel, PDA, or USB flash memory key

Cost-Effective

- Use same particle counter for ISO Class 1 – 9 applications
- Eliminates need for frequent, costly laser cleaning
- Easy to clean/wipe down; designed to minimize particle traps
- Rugged, chemical-resistant, ESA/ESD-compliant KYDEX® casing
- Cooled diode lasts longer; 3-year laser warranty
- Optional critical orifice configuration can use house vacuum for aerosol manifold applications

Without measurement there is no control.

Lasair[®] II-110

Particle Counter

specifications

Channel thresholds	0.1, 0.2, 0.3, 0.5, 1.0, and 5.0 μm
Flow rate	1 CFM (28.3 LPM); monitored and adjusted electronically for portable applications
Calibration	Materials traceable to US National Institute of Standards and Technology (NIST)
Test methodology	0.1 μm particles verified by Differential Mobility Analysis; larger sizes verified by transmission electron microscopy
Maximum concentration	@ 5% coincidence loss: > 500,000/ft ³ (optional diluter required for ISO Class 8+); automatic coincidence alarm
Zero count level	Exceeds JIS (Japanese Industrial Standards), allowing use in ISO Class 1 and ISO Class 2 rooms
Laser source	Laser diode, 4 W (de-rated to 2 W), 810 nm, infrared
Laser cooling	Thermoelectric chilling (Peltier cooler), heat sink, dedicated 5 CFM cooling fan
Warranty	3-year warranty on laser module, 2-year warranty on other components
Communication modes	Ethernet or RS-232; optional 4-20 mA output board; USB output
Environmental sensors	Optional Temp/RH probe; integrates up to 4 external sensors via 4-20 mA input
Display	1/4 VGA color LCD screen
Display languages	English, French, German, Italian, Japanese (Kanji), Korean, Spanish, Mandarin (classical or simplified)
Printer	Built-in thermal printer
Reports	Sample print strips; final reports for ISO/FS 209/British Standards cleanroom qualification; averages of multiple runs; print-on-alarm; sampling configuration printouts
Remote operation	Use web browser to operate unit; save or load recipes
Key software features	Recipes, scheduled sampling, historical data filtering, sorting and review, password protection
Data storage	3,000 data sets (includes particle and environmental data, plus location, time, etc.)
Data and sampling security	Stored data records cannot be altered; sampling recipes can be password protected
External surface	KYDEX chassis, polyester display screen, and zinc-plated steel bottom are all ESA/ESD compliant
Cleaning materials	Bleach, formaldehyde, ethyl/isopropyl alcohol, peroxide/quaternary ammonium solutions
Monitor cleanliness	Internally filters both pump exhaust (99.99+% @ 0.1 μm) and cabinet exhaust (95% @ 0.3 μm)
Dimensions (l, w, h)	18 x 14 x 13 in (45 x 35 x 32 cm)
Weight	37 lb (17 kg)
Power	85 – 264 V, 50 – 60 Hz; optional external battery/charger
Operating environment	Temperature: 15 – 30 °C; Humidity: 10 - 85% non-condensing

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U. S. patents pending. Foreign patents pending.
Particle Measuring Systems, Inc. reserves the right to change specifications without notice.

AUTHORIZED REPRESENTATIVE



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