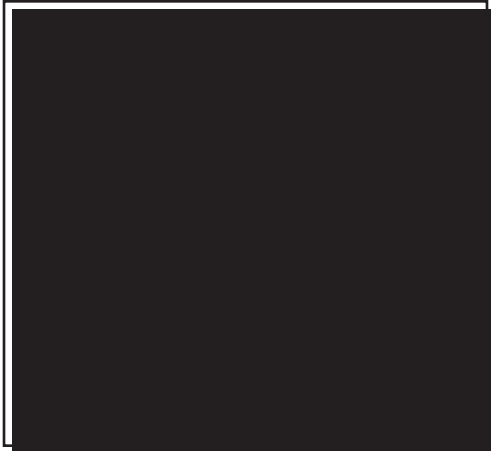


AccuFlux Process Controller



Real Time Measurement and Control of Atomic Fluxes



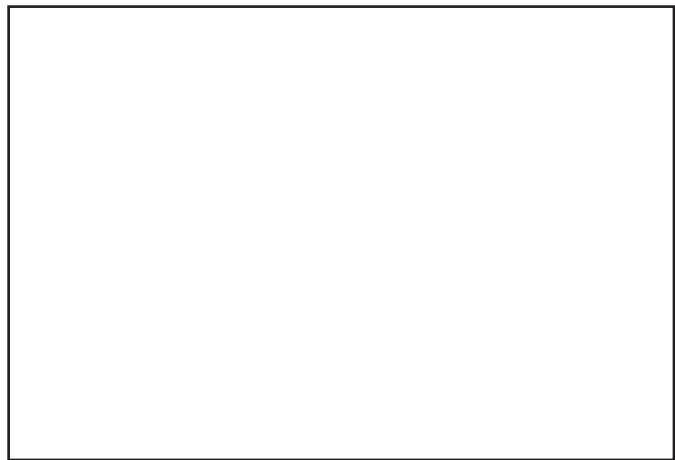
AccuFlux Process Controller

Features

- Innovative Optical Design for Fluxes of 0.002 nm/s
- Non-Intrusive, Multi-Flux Measurement
- Element Specific Lamps with High Brightness
- Flux Monitoring of Solid and Gaseous Sources
- Closed-Loop Control for Thickness Control
- Fully Computer Controlled with Windows GUI
- Industrial Interface to Shutter and Source Controller

Description

The AccuFlux process controller allows closed-loop control and monitoring of thin film deposition processes. It utilizes Atomic Absorption Spectroscopy to measure the atomic vapor flux density of solid and gas sources. An element specific lamp generates characteristic emission of an atomic species thus ensuring material selectivity and simultaneous multi-flux measurement. An innovative and proprietary design of the optical and electronic system with on-board DSP provides a sensitivity better than 0.002 nm/s. The system mounts to a 2.75" CF view-port in a dual-pass configuration. A software module makes all of the process variables available to a computer through RS-485 interface. The system provides analog and digital output signals for source and shutter control.



Ga Flux Absorption Sensitivity and GaAs Growth Rate Monitoring for Changing Effusion Cell Temperature

Specifications

Material System.....Customer Specified
Deposition Rate Range.....0.002 nm/s - 5 nm/s
Rate Equivalent Noise.....0.001A/s RMS or 1% F.S.
Sampling Frequency.....4-10 Hz
Optical Path Range.....1" - 25" Standard
Flange Mount.....2.75" CF
Weight.....6 lb (2.8kg)
Dimensions.....4.75" H x 12.5" L x 6.5" W
Light Source.....Hollow Cathode Lamp
Wavelength Selection.....Bandpass Filter (10nm FWHM)
Operating Temperature.....Max 100°C
Computer Requirements.....Windows 95, NT 4.0 or Higher
PC-Interface.....RS-485 or RS-232

