

AccuFlux™ Process Monitor

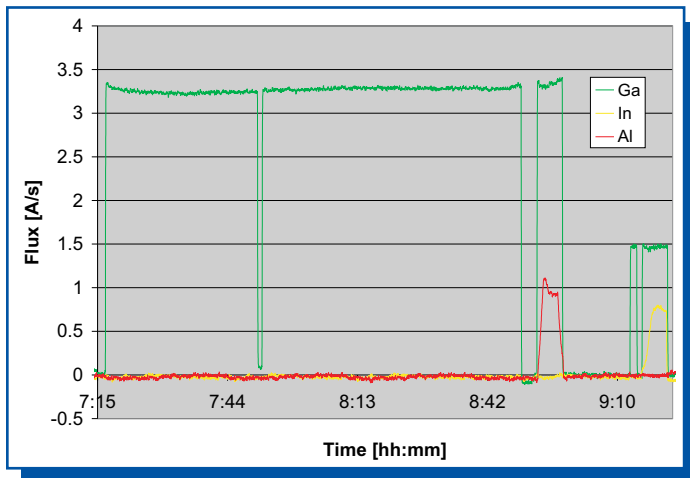
Real-Time Flux and Composition Monitoring

Description

The AccuFlux Process Monitor is a non-intrusive atomic absorption based in-situ flux monitor. Using element specific lamps, the AccuFlux is designed to measure vapor flux density of both solid and gas sources. The element specific lamps allow for up to four materials to be monitored simultaneously. An innovative, proprietary optical and electronic design with on-board DSP provides sensitivity better than 0.002 nm/s. The self referencing and self aligning design provides drift free and low maintenance operation.

Typical Applications

The AccuFlux process monitor can be used for a wide range of materials for both MBE and MOCVD. The optional remote control package is ideal for production applications, and allows AccuFlux to provide real-time feedback for automated shutter and source control. The AccuFlux can monitor materials in multiple source configurations, including linear and confocal arrangements. The material specific light sources allow for operation in an over pressure environment such as GaAs, CIGS, and Oxide deposition.



Data taken during production of a 7" x 6" HBT wafer deposition.

Features

- Innovative optical design for growth rates as low as 0.002 nm/s
- High intensity, element specific light sources
- Flux monitoring of solid and gaseous sources
- Remote control option for closed-loop control
- Control up to three materials simultaneously from a single unit

Specifications

Material System	Customer Specified
Deposition Rate Range	0.002 nm/s – 50 nm/s
Rate Equivalent Noise	0.001A/s RMS or 1% F.S.
Sampling Frequency	up to 10 Hz
Optical Path Range	25" Standard
Flange Mount	2¾" CF or Larger upon Request
Weight	6 lb (2.8kg)
Dimensions	4¾" x 12½" x 6½" (13 cm x 32 cm x 17 cm)
Light Source	Hollow Cathode Lamp Others available on Request
Wavelength Selection	Bandpass Filter (10 nm FWHM)
Computer Requirement	Windows XP
PC-Interface	RS-232

