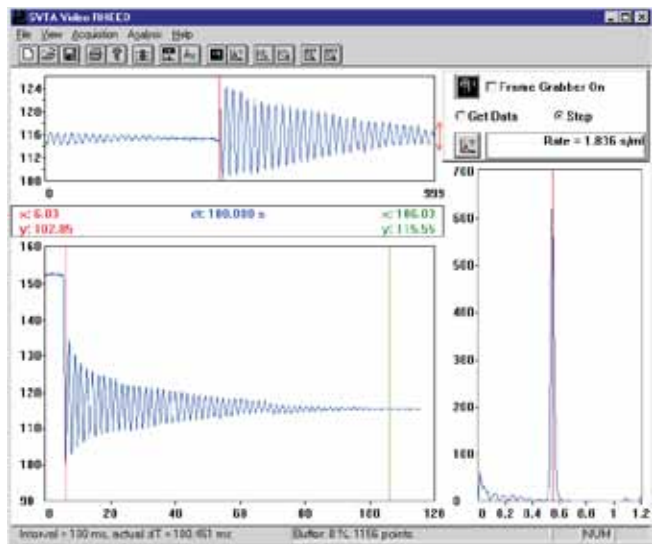


RHEED Image Analysis Software



Description

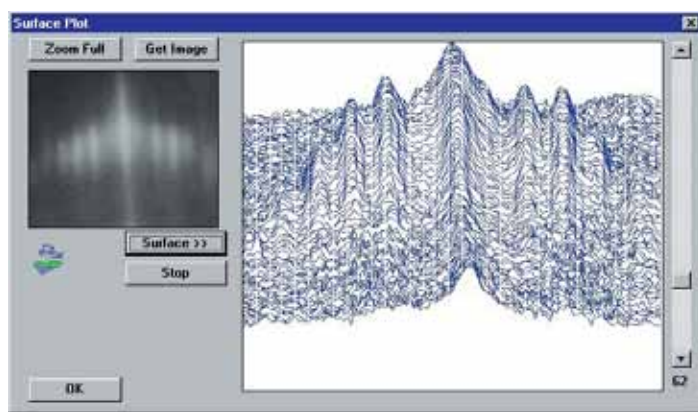
RHEED (Reflection High-Energy Electron Diffraction) is an essential tool for thin film deposition processes. SVT Associates developed a state-of-the-art RHEED Image Analysis Hardware/Software package that gives the user the necessary tools to gain insight into the thin film growth process and optimize material quality. The RHEED software is a multi-purpose program for analyzing RHEED patterns. The powerful software features tracking of RHEED intensity changes and measuring the rate of oscillations for quantitative determination of the growth rate. It also has image analysis capabilities such as capturing and profiling.

The software program takes input from a high sensitivity CCD camera and a frame grabber. All components are outside the thin film deposition system, hence retrofitting this package to existing machines is very simple. The video-computer interface allows for simple setup procedures. Coarse adjustments are made to the camera while the computer handles fine positioning. The FFT analysis of the oscillations can accurately determine rates even from very noisy signals. These factors make RHEED Image Analysis an indispensable tool in the day-to-day operation of a MBE system.

Models	Description
RH-IAS	Image Analysis Software
RH-CM-6	Camera Mount, 6" DFF View-Port
RH-CM-8	Camera Mount, 8" DFF View-Port

Features

- Hi-Sensitivity CCD Camera and Video Monitor
- Graphical User Interface Image and Video Capture
- Fully Windows Compatible Environment
- Intensity Tracking and Profiling
- Real-Time Oscillation Measurement and FFT Analysis
- Lattice Constant Measurement
- 2D and 3D Charts for Documentation



Surface plotting is a simple tool that can be used to visualize the RHEED image. It produces a three dimensional view of either the entire image or some part of it. The slider to the right of the plot determines the viewing angle which can be varied from 0 degrees (side view) to 80 degrees (nearly overhead).

Profile analysis allows the user to get an intensity profile along any line drawn on the video image. It also locks onto and tracks up to eight peaks, gives peak positions or separations and can save that data in a trend file. This screen is used to measure lattice constant spacing.

1/3" CCD Black & White Hi-Resolution and Hi-Sensitivity Camera with 6" CF or 8" CF Camera Mounting Hardware.

