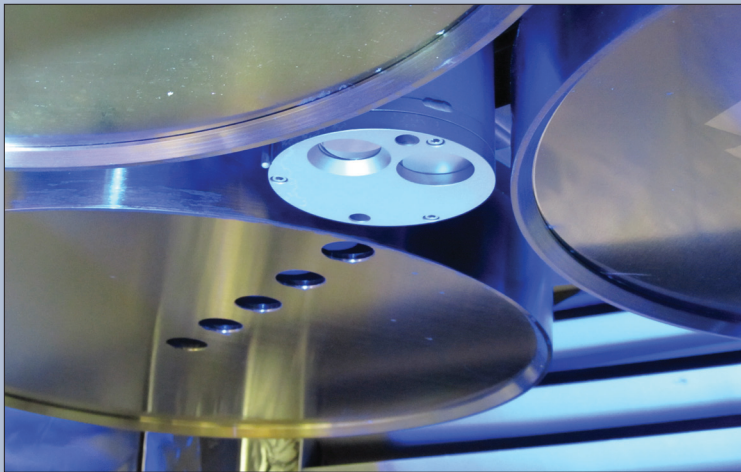


THIN FILM DEPOSITION

Spectrum-Pro

Broadband Optical Monitor



Dynavac's Spectrum-Pro Broadband Optical Monitor provides a new level of process control.

The Dynavac Spectrum-Pro Broadband Optical Monitor is a fully integrated hardware and software product that provides a new level of control for the production of thin films. It builds upon the success of the Spectrum-Pro Single Wave Monitor platform, adding intelligent film analysis and in situ re-optimization.

Wide-band measurements of coatings are obtained in real time during deposition with a variety of high-speed spectrometers. Measurements are analyzed and compared with coating models and if necessary, is adjusted in real time to achieve coating performance targets. This results in fewer test runs, higher repeatability, and the ability to produce more advanced coatings.

Dynavac has been designing, manufacturing, and supporting thin film deposition systems for over 30 years. Our customers represent a wide range of industries, but they share the same expectation: top-quality performance, consistent coating results, and exceptional operational support.

The flawless performance you expect

From the most respected name in precision optical coating systems: Dynavac



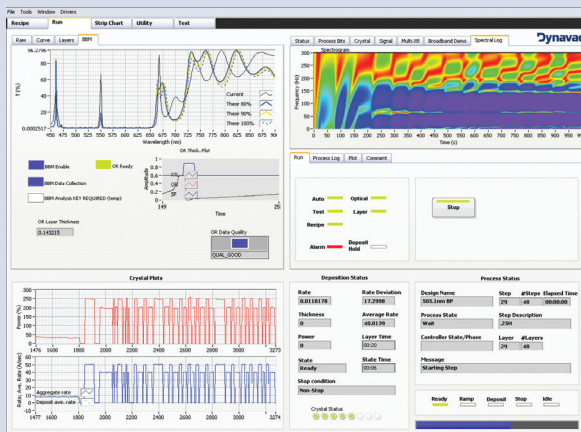
Full-Featured Capabilities

The Spectrum-Pro Broadband Optical Monitor enables the production of today's most advanced thin films with a high degree of confidence and control.

- In situ coating re-optimization
- Compatible with OptiLayer and most other film design software
- Dual monitor mode allows traditional turning point monitoring with secondary detector
- Full-featured deposition control interface
- Post-run analysis
- Controls spectral performance
- Continuous or intermittent measurement for planetary mechanisms
- Crystal monitor/broadband/single wavelength layer monitoring

A Powerful Partner

Spectrum-Pro's next generation of software provides an unparalleled level of control and automation. It incorporates a full-featured interface to OptiLayer's OptiReOpt, a highly optimized function library that provides real-time coating analysis and thickness re-optimization from broadband monitor data. It also provides theoretical spectral data that can be used to simulate the coating process and verify measurement data.



Broadband Monitor Run Screen

- Real-time Spectral Data and Layer Target
- Automatic Re-optimization
- Broadband Layer Monitoring

Spectrum-Pro Series Specifications

	Single Wave	Broadband	Optional
Range (nm)	350-2000	200-1000	Custom range
Wavelength Step (nm)	0.08	0.5 (350-700 model)	0.025 with 1/2 meter
Light Source	Quartz Tungsten Halogen		Laser Driven
Detector	Silicon/InGaAs	CCD	PMT and others
Slit (X by Y mm)	.01-1 X 10	.02 X 2 fixed	Optional Motorized
Data/Frame rate (n/sec)	10	200	
Configuration	Reflectance/Transmittance/Direct		