

The 250AT is the 'Step-up' model of the Exicor<sup>®</sup> birefringence measurement system family of products. This model was developed to replace the obsolete Exicor 350AT and is widely used for lighter weight but larger samples such as plastic films. Built on the Exicor 150AT frame, this system incorporates a larger scan area (up to 250mm x 250mm) while maintaining the desk top nature of the Exicor 150AT system. This is also the system most customers select when they choose the Exicor ATS (spectroscopic measurements) option for studying birefringence at different wavelengths. The larger stage size also allows for loading multiple small parts on the stage and in conjunction with the optional Exicor Macro+ software to execute automated routines to scan each part individually. The user can begin the routine and let it run for multiple shifts, overnight or even longer (depending on the application) without having to intervene.

With two measurement range options available to choose from (High Sensitivity and Extended Range), the system is well suited to address the demanding requirements of your larger light weight samples. The optional high speed scanning package makes high spatial resolution scans (<1mm grid spacing) practical.

#### Features:

- ◆ 250mm Automated XY stage
- ◆ 2D and 3D graphical representation of birefringence parameters
- ◆ Large and Flexible stage platform design for adding custom parts holders or process aids
- ◆ Advanced data analysis features included standard in user interface



**SPECIFICATIONS**

	<b>HIGH SENSITIVITY</b>	<b>EXTENDED RANGE</b>
<b>Retardation Range:</b>	0.005 to 120+ nm	0.005 to 300+ nm
<b>Retardation Resolution/Repeatability, nm<sup>1</sup>:</b>	0.001 nm / ± 0.008 <sup>2</sup>	0.001 nm / ± 0.015 <sup>3</sup>
<b>Angular Resolution / Repeatability<sup>1</sup>:</b>	0.01° / ±0.05°	0.01° / ±0.07°
<b>Measurement Rate<sup>4</sup>:</b>	up to 100 pps / sample size dependent	
<b>Size:</b>	910 mm (H) x 415 mm (W) x 700 mm (D)	
<b>Light Source Wavelength<sup>5</sup>:</b>	Various (633nm standard)	
<b>Measurement Spot Diameter<sup>6</sup>:</b>	Between 1 mm and 3 mm <i>native</i> (can be as low as 50 μm)	
<b>Modulation Technique / Frequency</b>	PEMLabs™ Photoelastic Modulator / 50 kHz and 50/60 kHz	
<b>Demodulation Analysis Technique:</b>	Hinds Instruments Signaloc™ Lock-in Amplifier or Waveform Capture Card	
<b>Measurement Units:</b>	nm (retardation), ° (angle)	

<sup>1</sup> Typical performance at 5nm retardation

<sup>2</sup> Up to 0.8nm, 1% thereafter

<sup>3</sup> Up to 1.5nm, 1% thereafter

<sup>4</sup> Maximum data collection speed. Sample XY scan time dependent on stage movement parameters

<sup>5</sup> Custom wavelengths available

<sup>6</sup> Spot sizes of less than 1mm native require optional high resolution detector module

OPTIONS:

- ♦ Additional Polarization Parameters
- ♦ Hinds Scan in Motion™ (High Speed Scanning)
- ♦ Spectroscopic and RGB measurements
- ♦ Custom wavelengths (VIS, NIR)
- ♦ Manual and Automated tilt stages
- ♦ Custom samples holders
- ♦ Custom Software (UI or DLL)
- ♦ Stress Estimation Calculations