

COMPENDIUM

Comparison between nanofilm_ep3bam and nanofilm_ultrabam

INTRODUCTION

The new nanofilm_ultrabam is the first commercial instrument providing high resolution AND overall focused real time imaging of monolayers. The nanofilm_ep3bam is an established instrument and the base model of the nanofilm_ep3 product family. To find the fitting instrument to your application, the table shown below compares the technical specifications of the nanofilm_ep3 with that of the nanofilm_ultrabam.

	nanofilm_ep3bam	nanofilm_ultrabam
<i>Optical system</i>		
Real time contrast image	Focus line	Fully focused
Focusing method	Focus scanner	Modified Scheimpflug setup
Lateral resolution	4 μm (2x objective), 1 μm (20x Objective) on non moving samples	2 μm also on floating samples
Field of view	2x 2 mm 5x 900 μm 10x 400 μm 20x 200 μm	~ 800 x 430 μm
Analyzer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Image detector	768x572 pixel CCD	1392 x 1040 pixels
<i>Mechanical properties</i>		
Goniometer	38° - 90°	52° - 57°
Resolution	0.001°	0.001°
Reproducibility	0.01°	0.01°
z-lift	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Active vibration isolation	On request	<input checked="" type="checkbox"/>
<i>Software</i>		
Real time geometrical correction for angle-dependent image aspect ratios	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
background compensation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (automatic)
quantitative BAM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AVI-recorder	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Automatic z-tracking to follow changing water level	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Software interface to NIMA or KSV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Upgrade and options</i>		
Massive steel table	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dust protection, laser safety cabinet, clean room minienvironment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Upgrade to imaging ellipsometer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

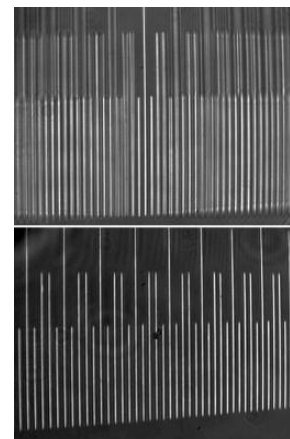


Figure 1. A microscale imaged with conventional BAM optics (above) and nanofilm_ultrabam (below) illustrates the quality gain of the new optics.