

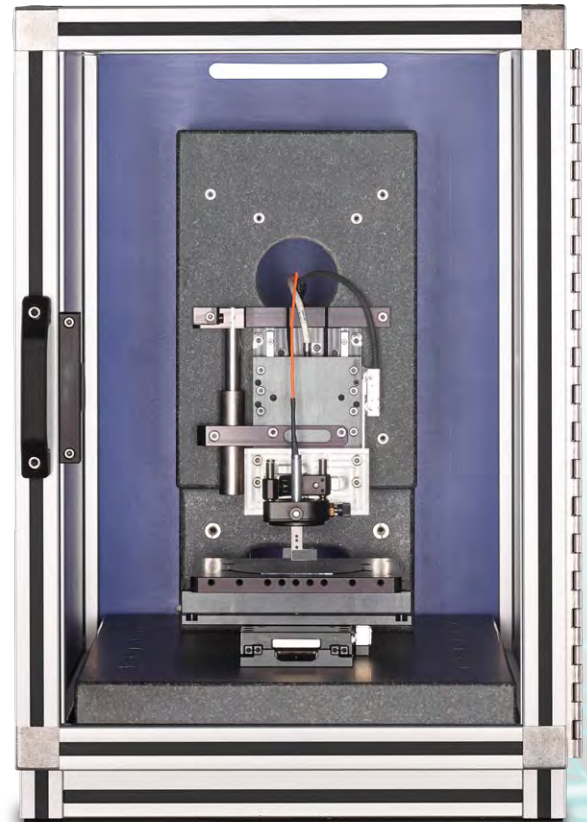
## QuickOCT-4D™

### Bench-Top, High-Speed, High-Accuracy, Non-Contact 4D Surface & Thick-Film Profiler

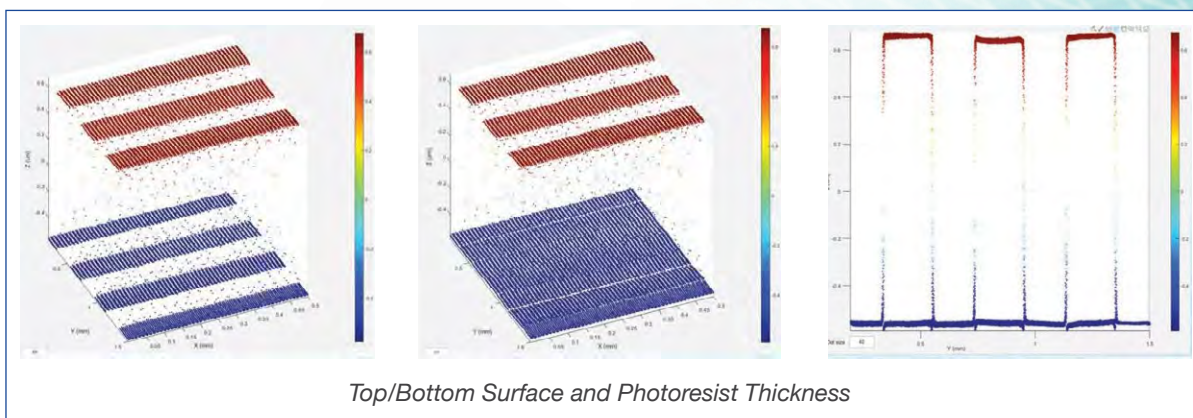
Combining a single-point, visible-light, spectral-domain optical coherence tomography (SD-OCT) sensor with a high-speed, nanometer-encoded X/Y/Z motion-control stage, the QuickOCT-4D™ can capture the plane of each layer within transparent film samples in a single measurement, at up to 66 kHz. The QuickOCT-4D™ penetration depth (up to 100µm) and axial resolution (5nm) is optimized for the measurement of multi-layer transparent films, flat substrates, and functional layers in the semi-conductor, life science and pharmaceutical industries.

#### Features

- Compact, bench-top unit with enclosure
- Single-point, non-contact, Optical Coherence Tomography (SD-OCT) sensor with up to 66 kHz measuring rate
- Optimized for measuring topography and thickness of multi-layer transparent films and substrates
- Nanometer precision X/Y/Z linear motor stages for fast raster or spiral scanning over 100mm (X), 100mm (Y), 50mm (Z)
- Available vacuum chucks for sample and tray holding
- User-friendly CalcuSurf-4D™ software for recipe generation, data acquisition, surface topography and multi-layer film analysis

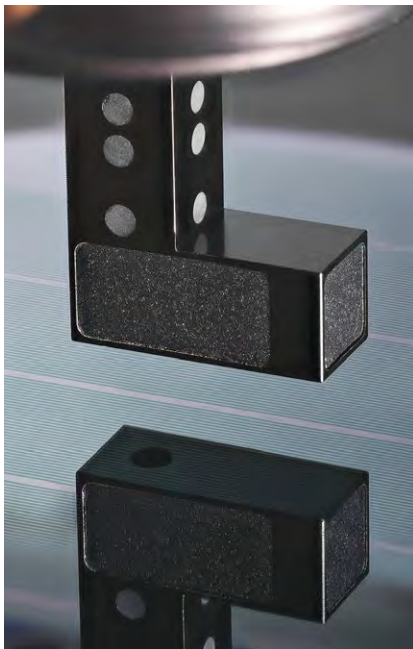


#### Raw Point Cloud Data



## Applications

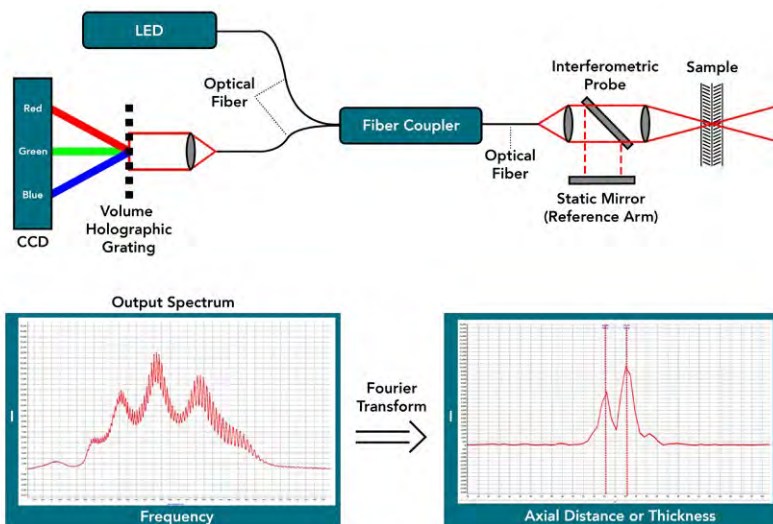
The measurement of patterned photoresist (or similar transparent coatings) on a silicon, GaAs or glass wafer for backend semi-conductor, advanced packaging, display, LED, VCSEL and MEMS as a quality control post-develop and pre-etch.



V-1 probe measuring a patterned silicon wafer

SYSTEM			
<b>Dimensions (L: W: H)</b>	535mm x 380 mm x 510mm		
<b>Weight Approx.</b>	60kg		
<b>System Controller</b>	Motion and sensor control; high-speed data link		
<b>Power Requirements</b>	110-220V AC, 50-60 Hz, 2 amps (220V), 5 amps (110V)		
MOTION			
<b>Measurement Area (X : Y : Z)</b>	100mm x 100mm x 50mm		
<b>Position Accuracy</b>	< 1μm		
<b>Drive Type</b>	Linear servo motor w/magnetic counterbalance		
<b>Stage Speed</b>	100mm/s		
<b>Scan Type/Path</b>	Spiral, Raster, User-Defined		
<b>Load Capacity</b>	5kg		
SENSORS			
<b>Technique</b>	Spectral Domain OCT (non-contact thickness)		
<b>Applications</b>	Profile and Thickness		
<b>Sampling</b>	Up to 66kHz		
<b>Available Probes*</b>	V-1	N-2	N-3
<b>Lateral Resolution</b>	6.5μm	3μm	3μm
<b>Working Distance</b>	10.6mm	40mm	40mm
<b>Axial Resolution</b>	1nm	1nm	4nm
<b>Maximum Slope</b>	±10°	±5°	±5°
<b>Thickness Range (OPD)</b>	2μm - 180μm	16μm - 2600μm	114μm - 12.6mm
MEASUREMENTS			
<b>Axial Measurement Accuracy</b>	≤ 0.001mm		
<b>Thickness Accuracy</b>	< 0.001mm	Depends on refractive index	

\* Additional probes available upon request



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