

## LAS-BT™ NexGen

### Compact, Bench-Top

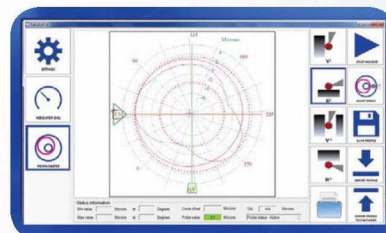
*Economical Solution  
for Compact Lens  
Assemblies*

#### INCLUDES:

- Green (520nm) laser reflection based Optical Module
- 533mm vertical linear focusing movement with micro-stepping motor and high-precision rotary encoder
- Ø100mm motorized air-bearing spindle (ABS) with vacuum through center
- Ø150mm integrated x/y/tip/tilt stage
- CalcuLens™ Assembly software for measuring alignment errors of single, cemented doublet and cemented triplet lenses
- Measuring accuracy 0.2µm centration and 0.5 arcsec tilt, depending on the lens specs and opto-mechanical design
- Mechanical dial indicator with calibration lens
- Maximum axial load capacity 125lb (57Kg)
- System weight 155lb (70Kg)
- System dimensions 18"x20"x45" (457x508x1143mm)
- System Requirements:
  - Compressed air, pressure: 60PSI (0.004bars)
  - Dry air: 40 Dew point
  - Filter: ±0.005mm
  - Air flow: 4 ft³/min (0.113 m³/min)
  - Electrical rating: 120/240V 50/60Hz @ 1Amp

#### OPTIONS:

- Additional wavelengths: Blue (450nm), NIR (850nm/940nm), SWIR (1550nm), MWIR (4.05 µm), LWIR (9.50 µm)
- Extended vertical travel: 633 mm
- Motorized rotary air bearing
- Custom lens and housing holding fixtures
- CalcuLens™ Inspection software for measuring in-stack (embedded) lens alignment values
- CalcuSurf2D™ real-time profiling/gauging software with 0.1 µm precision USB lever probe for aligning housings and lenses with rotary axis. Non-contact probes also available.
- LAS-DMI™ low-coherence SWIR Distance Measurement Interferometer for the measurement of lens center thickness and air gaps over a 200mm range at ±1 µm accuracy (±0.1 µm accuracy and 600mm measurement range options also available)
- LAS-Vertex/ROC™ autofocus-based vertex height measurement at ±2.5 µm accuracy for the measurement of air gaps during assembly, lens center thickness and air gaps of cemented or air spaced doublets/triplets (< 50mm stack height), and single lens ROC (0.05% accuracy)
- LAS-ATM™ Aspheric Tilt Measurement of aspheric surfaces
- LAS-IAM™ Image Analysis Measurement (on-axis MTF, EFL & beam deviation) in transmission
- LAS-SPM™ Surface Profiling of single lens/mirror surfaces at 20nm resolution and 200 nm accuracy



**CalcuSurf 2D™ v2.0**  
Profiling software for  
LAS™ stations with USB  
integrated electronic  
contact probes



**CalcuLens™ v2.8**  
Alignment Software  
for LAS™ Stations

## Laser Alignment and Assembly Station™ (LAS™) Options Matrix

● Standard  
○ Option

	LAS-BT	LAS-P	LAS-UP	LAS-XUP
<b>Light Source</b>				
Blue Laser @ 450nm	○	○	○	○
Green Laser @ 520nm	●	●	●	●
Red Laser @ 660nm	○	●	●	●
NIR Laser @ 850nm/940nm	○	○	○	○
SWIR Laser @ 1.55µm	○	○	○	○
MWIR Laser @ 4.05µm	○	○	○	○
LWIR Laser @ 9.50µm	○	○	○	○
<b>Detector</b>				
Visible camera (1600 x 1200)	●	●	●	
Large-Format Visible Camera (2500 x 2000)	○	○	○	●
Infrared camera (640 x 480)	○	○	○	○
<b>Air-bearing, (vacuum through)</b>				
Air-bearing Ø100mm (optional Ø150mm work table)	●			
Air-bearing Ø150mm (optional Ø200mm work table)		●		
Air-bearing Ø200mm (optional Ø300mm work table)		○		
Air-bearing Ø300mm (optional Ø400mm work table)			●	
Air-bearing Ø400mm (optional Ø600mm work table)			○	
Air-bearing Ø600mm (optional Ø800mm work table)				●
Air-bearing Ø800mm (optional Ø1000mm work table)				○
Tip/tilt/x/y stage	●	●	●	●
Rotary Encoder	●	●	●	●
Motorized Air-bearing	●	○	○	○
Maximum Axial Load Capacity	57Kg	226Kg	454Kg	907Kg
<b>Measuring Head</b>				
Single Objective for Spheric, Aspheric, Cylindric Surfaces	●	●	●	●
<b>Range of Lens Radii</b>				
± 0.5mm to Plano	●	●	●	●
<b>Measurement Assessment</b>				
Live Orbit Image on Monitor	●	●	●	●
Software Numerical Data Display	●	●	●	●
Angle Measurement (accuracy in arc seconds)	0.5	0.5	0.5	0.5
Centration Measurement (accuracy in microns)	0.2	0.2	0.2	0.2
<b>Measurement Head Linear Processing</b>				
Automatic PC Controlled (variable speed)	●	●	●	●
Linear Travel	● (533mm) ○ (633mm)	● (1000mm) ○ (1250mm) ○ (1500mm)	● (1250mm) ○ (1500mm) ○ (2000mm)	● (2000mm) ○ (3000mm)
<b>Measurement Modules</b>				
CalcuLens™ Assembly (measure single lens)	●	●	●	●
CalcuLens™ Inspection (measure alignment in stack)	○	○	○	○
Low-Coherence Center Thickness & Air-Gap (±1µm accuracy)	○	○	○	○
Vertex Height Measurement (± 2.5µm accuracy)	○	○	○	○
Aspheric Tilt Measurement (± 2 arcsec accuracy)	○	○	○	○
Image Analysis Measurement (MTF, EFL, etc)	○	○	○	○
<b>Structural Material</b>				
Granite Base; Granite Column	●	●	●	●



LAS-BT



LAS-P



LAS-UP



LAS-XUP

Distribution in the UK & Ireland



[www.lambdaphoto.co.uk](http://www.lambdaphoto.co.uk)

Member

