

LAS-XUP™

Meter Class, Ultra Precision

INCLUDES:

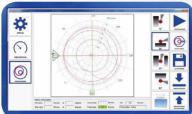
- Green (520nm) and Red (660nm) pigtailed diode lasers with single mode optical fiber transport from external Light Generation Module (LGM) to Optical Module (OM) on vertical stage
- Latest-generation aspheric focusing and re-imaging optics
- State-of-the-art 12 megapixel ultra-small-pixel CMOS camera for best sampling of image
- 2000mm vertical linear focusing movement with multi-speed stepper motor and micron accuracy encoders (error mapped)
- Ø600mm rotary air-bearing with integrated Ø600mm x/y/tip/tilt table
- Ø800mm top plate for extra-large optics/housings
- CalcuLens[™] Assembly software for measuring alignment errors of single lens, cemented doublets & triplets
- Centration accuracy: 0.2µm
- Tilt accuracy: 0.5 arcsec
- Maximum axial load capacity ~ 2000lb (907Kg)
- System Weight ~ 6200lb (2812Kg)
- System dimensions 79"x59"x130" (2000x1500x3300mm)
- 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)
- Larger rotary air bearing: Ø800 mm
- Extended rotary worktable for larger optics/housings: up to Ø1000 mm
- Extended vertical travel: 3000 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. Noncontact 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



Options Matrix

Laser Alignment and Assembly Station™ (LAS™)

StandardOption

LAS-BT

LAS-P

LAS-UP

LAS-XUP

- Option				
Light Source				
Blue Laser @ 450nm	0	0	0	0
Green Laser @ 520nm				
Red Laser @ 660nm	0		•	
NIR Laser @ 850nm/940nm	0	0	O	0
SWIR Laser @ 1.55µm	0	0	O	0
MWIR Laser @ 4.05µm	0	0	0	0
LWIR Laser @ 9.50µm	0	0	O	0
Detector				
Visible camera (1600 x 1200)	•	•	•	
Large-Format Visible Camera (2500 x 2000)	0	0	0	•
Infrared camera (640 x 480)	0	0	0	0
Air-bearing, (vacuum through)				
Air-bearing Ø100mm (optional Ø150mm work table)	•			
Air-bearing Ø150mm (optional Ø200mm work table)		•		
Air-bearing Ø200mm (optional Ø300mm work table)		0		
Air-bearing Ø300mm (optional Ø400mm work table)			•	
Air-bearing Ø400mm (optional Ø600mm work table)			0	
Air-bearing Ø600mm (optional Ø800mm work table)				•
Air-bearing Ø800mm (optional Ø1000mm work table)				0
Tip/tilt/x/y stage		•	•	•
Rotary Encoder	•	•	•	•
Motorized Air-bearing	•	0	0	0
Maximum Axial Load Capacity	57Kg	226Kg	454Kg	907Kg
Measuring Head				
Single Objective for Spheric, Aspheric, Cylindric Surfaces	•	•	•	•
Range of Lens Radii				
± 0.5mm to Plano	•	•	•	•
Measurement Assessment				
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
Measurement Head Linear Processing	0.12	3.1		
Automatic PC Controlled (variable speed)	•	•		
Linear Travel	•	•	•	•
Linear naver	(533mm)	(1000mm)	(1250mm)	(2000mm)
	(633mm)	(1250mm)	(1500mm)	(3000mm)
		(1500mm)	(2000mm)	
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Measurement Modules				•
CalcuLens™ Assembly (measure single lens)				
CalcuLens™ Inspection (measure alignment in stack)	0	0	0	0
Low-Coherence Center Thickness & Air-Gap (±1µm accuracy)	0	0	0	0
Vertex Height Measurement (± 2.5µm accuracy)	0	0	0	0
Aspheric Tilt Measurement (± 2 arcsec accuracy)	0	0	0	0
Image Analysis Measurement (MTF, EFL, etc)	0	0	О	0
Structural Material				
Granite Base; Granite Column	•	•	•	•



LAS-BT



LAS-P



LAS-XUP

Opto Alignment-USA

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