

Product



LAS-XUP-VIS/IR™

SKU: LAS-XUP-IR

Quantity

1

Meter-Class LAS for Precision Assembly and Inspection of Large Diameter, Long Radius Optics

Advanced Lens Alignment and Optical Metrology Solutions



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- State-of-the-art Optical module design optimized for exceptionally high tilt/centration sensitivity at very long radius of curvature (ROC = 1000mm to infinity)
- Cored granite column and table result in stiff metrology loop with low thermal sensitivity
- Highest quality rotary air bearing with less than 50 nm run-out / wobble
- Ultra-high-resolution optical encoders with nanometer interferometric mapping of vertical axis for micron-level position accuracy
- Large-format, small pixel camera provides highest sensitivity to small TIR at large ROC
- Custom objective for measuring alignment of mirrors with holes

SPECIFICATIONS:

- SWIR (1550nm), MWIR (4.05μm), LWIR (9.15μm) Red (660nm) and Green (520nm) 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 to Ø1000mm top plate for extra-large optics/housings
- CalcuLens™ Assembly software for measuring alignment errors of single lens, cemented doublets & triplets
- Centration accuracy: 0.2μm centration @ ROC ≤ 10m
- Tilt accuracy: 0.5 arcsec @ ROC ≥ 10m
- Maximum axial load capacity ~ 2000lb (907Kg)
- System Weight ~ 6200lb (2812Kg)
- System dimensions 79"x59"x130" (2000x1500x3300mm)

OPTIONS:

- CalcuLens™ Inspection software for measuring in-stack (embedded) lens alignment values
- CalcuSurf2D™ real-time TIR dial and profiling software. Can be interfaced with 0.1μm resolution contact lever probe or new non-contact chromatic confocal distance measurement sensor.
- LAS-Vertex/ROCTM add-on software & hardware for the measurement of lens center thickness and air gaps at +/- 2.5μm accuracy (20mm to 50mm measurement range)
- LAS-DMITM low-coherence SWIR interferometer for the measurement of lens center thickness and air gaps at +/- 1μm accuracy (200mm to 600mm measurement range)



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