



# Opto Alignment

## **LAS-BT-MWIR™**

**NEW** Compact Bench-Top MWIR Alignment System

- The most ACCURATE and POWERFUL Mid-Wave IR Alignment System Available
- Optimized for Precision Alignment of Smaller LWIR & MWIR Lens Assemblies
- Quantum Cascade Laser with Single Mode Optical Fiber Transport
- Lowest Entry Point to Mid-Wave IR
- Lens Thickness and Air Gap Measurement
- Multi Lens Capable



Designed and Built in the USA



## LAS-BT-MWIR™ Compact, Bench-Top

High-accuracy MWIR lens alignment in a compact bench-top platform. Optimized for precision alignment and inspection of smaller LWIR/MWIR lens assemblies.

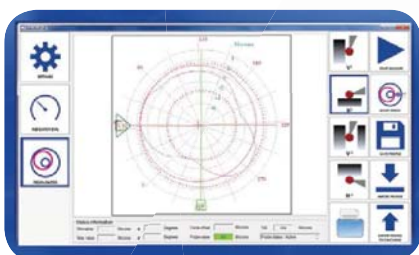
### INCLUDES:

- MWIR (4.05 $\mu$ m) Quantum Cascade laser coupled with single mode optical fiber
- Aspheric collimating and objective lenses
- Broadband high-dynamic-range (14 bit) micro bolometer focal-plane-array (uncooled)
- 500mm vertical linear focusing movement with multi-speed stepper motor and micron precision rotary encoder
- $\varnothing$ 100mm motorized air-bearing-spindle (ABS) with integrated  $\varnothing$ 150mm x/y/tip/tilt stage and vacuum through center
- CalcuLens™ Assembly software for measuring alignment errors of single lens, cemented doublets, and triplets
- Measuring accuracy 1 $\mu$ m centration and 2 arcsec tilt (depending on the lens specs and opto-mechanical design)
- Mechanical indicator with 1 $\mu$ m resolution
- Maximum axial load capacity ~132lb (60Kg).
- System weight ~98lb (44Kg).
- System dimensions 17"x18"x39" (432x457x990mm)
- System Requirements:
  - Compressed air, pressure: 60PSI (0.004bars)
  - Dry air: 40 Dew point
  - Filter:  $\pm$ 0.005mm
  - Air low: 4 SF/Min (0.113CM/Min)
  - Electrical rating: 120/240V 50/60Hz @ 1Amp

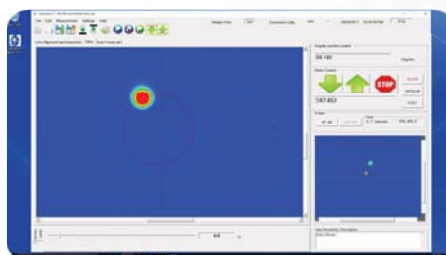
### OPTIONS:

- 750mm vertical focusing travel
- Custom brass chucks
- Self centering three-jaw chuck
- CalcuLens™ Inspection software for measuring in-stack (embedded) lens alignment values
- CalcuSurf™ real-time TIR dial and profiling software. Can be interfaced with 0.1 $\mu$ m resolution contact level probe or new non-contact chromatic confocal distance measurement sensor.
- Vertex MWIR Measurement software for lens center thickness and air gap measurement (20mm to 50mm measurement range)
- Low-coherence SWIR interferometer for lens center thickness and air gap measurement (200mm & 600mm range)

*Most Accurate &  
Powerful MWIR  
Alignment System*



**CalcuSurf™ v1.0**  
Profiling software for LAS™ stations



**CalcuLens™ v2.7**  
Alignment Software for LAS™ Stations