

## LAS-UP-IRTM

**Industry First 4-Color Alignment System** 

- The Most ACCURATE and POWERFUL IR Alignment System Available
- Alignment and Inspection of Larger IR Lens Assemblies with Sub-Micron Accuracy
- Quantum Cascade Laser with Single Mode Optical Fiber Transport
- · Lens Thickness and Air Gap Measurement
- Red / Green / MWIR / LWIR Lasers
- Multi Lens Capable
- Optional Non-Contact TIR Sensor



Alignment and inspection of assembled IR lenses is now possible at sub-micron accuracy with the IR Laser Alignment Station  $^{\text{TM}}$ . The LAS-UP-IR $^{\text{TM}}$  is designed as a dual use assembly/inspection station utilizing a combination of 4.05 $\mu$ m MWIR and 9.50 $\mu$ m LWIR software-controlled, variable power quantum cascade lasers (0.1 $\mu$ m to 10 $\mu$ m at the objective) as well as visible diode lasers, 660nm and 520nm, to allow assembly/inspection of visible and IR lens systems with radii  $\pm$  1 $\mu$ m to infinity without changing objectives.

## CalcuLens™ Inspection Software with LAS-UP-IR™ allows measurement accuracy < 1.0 µm:

- Top surface centration (µm) or tilt (arcsec): Normal and confocal reflections
- Bottom surface centration (µm) or tilt (arcsec): Normal and confocal reflections
- Overall lens optical axis (µm) and wedge/tilt (arcsec)

- Centration (µm) and tilt (arcsec) of any lens surface in finished assembly (some reflections may not be visible due to AR coatings, lens CT, air gaps, etc)

