

SWIR

WAVEFRONT SENSING & AO

APPLICATION
SUMMARY

HIGH ACCURACY
WAVEFRONT SENSOR

METROLOGY
TOOLS FOR SWIR

ADAPTIVE OPTICS
INTEGRATION

20 HZ LIVE DISPLAY
& GATING POSSIBILITY



Wavefront sensors and optical metrology tools for the short-wave infrared range

SpotTracker

WHAT WE OFFER

- HASO SWIR wavefront sensor for 0.9-1.7 μm with $\lambda/100$ RMS absolute accuracy
- R-Flex2 SWIR, the metrology system composed of a HASO SWIR, an integrated light source and various F-number objective modules
- R-Flex2 SWIR Large Aperture, the metrology system composed of a HASO SWIR, an integrated light source and a beam collimator for aperture of up to 150 mm
- Adaptive optics system composed of a HASO SWIR, the control software and an active component of your choice (such as a Mirao52e, a Miraro52es, or an ILAO Star)
- Customized wavefront sensor or system

TECHNOLOGY


- Advanced hardware and software for absolute wavefront and tilt measurement without alignment, thanks to our SpotTracker technology
- Patented technology allowing simultaneous and independent measurements of phase and intensity
- Highly accurate wavefront analysis, also for central-obscuration and analysis, even for cases with a central obstruction and/or spider vanes
- Achromatic measurements with high linearity
- 20 Hz live display, up to 150 Hz in sequence mode, and 100 ns gating for time-resolved measurements

Contact Imagine Optic for more details: contact@imagine-optic.com or +33 1 64 89 15 60

ImagineOpticTM

RECOMMENDATIONS

Laser beam characterization and alignment







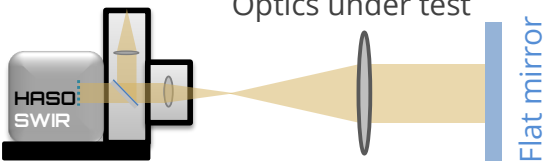
or



The HASO SWIR wavefront sensor can be used to directly measure the phase and amplitude of laser beams with wavelengths of 0.9 - 1.7 μm . It is extremely useful for the alignment of optics and laser beams with very high accuracy and high repeatability, such as for free-space telecommunication and LIDAR applications. Adding a light source and some additional optics makes it possible to analyze optical components.

Optics characterization





The HASO R-Flex2 SWIR, a Shack-Hartmann wavefront sensor with an integrated light source, provides several configurations for transmitted and reflected wavefront measurements of optics under test in the 1.0-1.7 μm wavelength range. Similar to the HASO SWIR, this metrology system enables chromatism, PSF and MTF measurements. Add-on objectives are available with several F numbers. Applications span from small lenses up to telescopes with apertures of more than 1


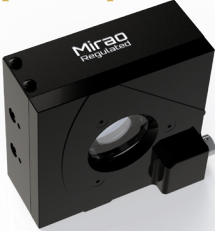
Large optics or large beam characterization

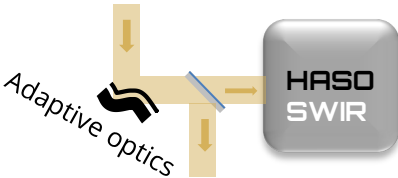




The R-Flex2 SWIR Large Aperture is a combination of the HASO R-Flex SWIR and a beam collimator for the measurement of large optics in the 1.0-1.7 μm wavelength range. It is suitable for flat window, windshield, plane mirror and laser beam analysis. Possible aperture sizes are from 30 mm up to 150 mm.

Adaptive optics





The HASO SWIR is useful for the calibration of adaptive optics systems, as well as being the main components of a closed-loop system. Thanks to fast and accurate algorithms, the HASO SWIR is suitable for adaptive optics systems, in a combination with mirao52e, mirao52es, SML or other active component of your choice.

Existing users: NASA, Nikon, and Mynaric

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