HASO4 SWIR 1550

IDEAL WAVEFRONT
SENSOR FOR 1500 - 1600 nm

ADVANCED
METROLOGY WAVEFRONT SENSOR

COMPACT
ROBUST AND VERSATILE

EASY TO USE
AND INTEGRATE

The ideal tool for aligning and characterizing optical components or optical systems in the near infrared

A UNIQUE SET OF ADVANTAGES

- $\lambda/35$ rms absolute accuracy over 200λ dynamic range
- Calibrated wavelength range: 1500 -1600 nm
- Patented technology for simultaneous and independent measurements of phase and intensity
- 99 Hz acquisition frequency

- External trigger capability
- C-mount compatible entrance aperture
- Easy to deploy with USB 3.0 connectivity
- Bundled with WaveView, the industry's most advanced metrology software
- Compatible with WaveKit (Software Development Kit) in C, MATLAB, and LabVIEW

Contact us for more details: contact@imagine-optic.com or +33 1 64 86 15 60

HASO4 : THE ADVANCED METROLOGY WAVEFRONT SENSOR
SWIR 1550

Providing outstanding performance, the HASO Wavefront Sensor family is used on the most demanding applications in optical metrology, microscopy and laser diagnostics worldwide. We offer a unique combination of expertise in high quality microlens production, software development and accurate factory calibrations. This allows the HASO4 to provide a level of performance beyond comparison.

- $\lambda/35$ rms absolute accuracy on a huge dynamic range (see the graph below)
- Measurement up to 64 Zernike polynomials
- Patented wavefront correction algorithms for intensity beam variations (laser, Gaussian, hyper Gaussian, apodized beams...)

HASO4 SWIR 1550 typical dynamic range (PtV) on a Ø3.6mm pupil
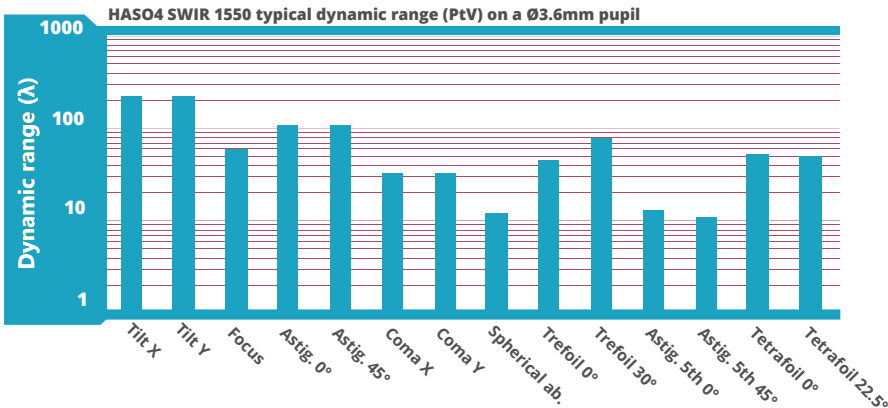
OUTSTANDING PERFORMANCE EXAMPLES WITH HASO4 SWIR 1550

- Beam collimation with an accuracy better than 30m radius of curvature.
- Direct wavefront acquisition of converging and diverging F/5 beams
- Control and adjustment of axial laser beam deviation better than 20µrad rms
- 3D localization of a focal spot up to 0.5µm rms and 5µm rms for lateral and axial resolution respectively (0.1 NA beam)

SOFTWARE

- WaveView is the most advanced wavefront measurement and analysis software. It offers more than 150 functions and tools optimized for a wide range of highly demanding applications. WaveView development philosophy is based on tens of years of customer's feedback, improving the user experience at each version. Modules dedicated to PSF, Strehl ratio, MTF, M² are available.

- WaveKit is a SDK, providing the basis blocks on which one can build a fully customized software for specific HASO based applications or WaveView data processing routines. WaveKit is available on request.

Aperture dimension	3.6 x 4.5 mm²
Number of microlenses	32 x 40
Tilt dynamic range	> ± 3 °
Focus dynamic range	± 0.018 m to ± ∞
Repeatability (rms)	< $\lambda/70$
Wavefront measurement accuracy in absolute mode (rms)	~ $\lambda/35$
Spatial sampling	~ 110 µm
Maximum acquisition frequency	99 Hz
External trigger	TTL signal
Wavelength range	1500-1600 nm
Dimensions (LxWxH) / weight	60x 48 x 42 mm³/185g
Working temperature	15 – 30° C
Interface / Power supply	USB 3.0 / 2.7 W via USB
Operating system	Windows 7 and 10