

HASO

Wavefront sensor **The Ultra**

Deep Ultraviolet High accuracy Alignment-free







With the HASO DUV, Imagine Optic is extending its spectral range of testing in the UV and DUV.

This generation of sensors features the SpotTracker™ technology. It provides absolute wavefront and tilt information, eliminating alignment requirements for faster and easier implementation.

APPLICATIONS

The HASO DUV is a factory-calibrated sensor for absolute measurements in the UV range and high accuracy wavefront sensing. Light and compact, it is easy to implement in any optical configuration and its live measurement makes it a perfect tool for alignment or adaptive optics.

- + Lithography, semiconductor manufacturing
- + Characterization of optics, objective, lens with transmitted wavefront error (TWE) and surface shape in reflection (SFE)
- + Laser fusion
- + Adaptive optics and closed-loop control
- + Excimer laser-based applications
- + Alignment and optimization of sources with optical path, based on live aberration information

FEATURES

HASO DUV packs:

- + Accuracy of $\lambda/100$ RMS permitting small defects detection
- + Dynamic range superior to 1000 λ for direct wavefront acquisition of converging and diverging beams
- + Spectral range in the UV including 405nm for easy setting of the sensor.



SPECIFICATIONS*

OPERATING SPECS

7.7 x 7.7 mm² Aperture dimension Number of microlenses 86 x 86 Maximum acquisition frequency 25 Hz Calibrated wavelength range 240-410 nm, 190-280 nm on demand

Minimum power 0.5 nW External trigger TTL signal Operating system Windows 11 & 10

OPTICAL SPECS

Repeatability Absolute wavefront measurement accuracy Spatial sampling

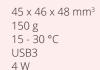
~ 90 µm ± 0.02 m to ± ∞ Local radius of curvature dynamic range Beam aperture (f-number) > 5

MISC

Dimension (Height x Width x Length) Weight Working temperature

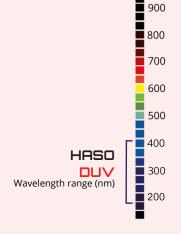
Interface

Power consumption



< 2 nm RMS

< 4 nm RMS



1000

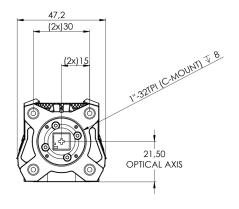
HASO DUV

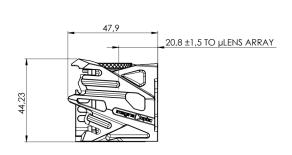
Dynamic range at $\lambda = 350 \text{ nm}$



*Subject to changes without further notice Acquisition & processing frequencies depend on computer

DIMENSIONS (mm)





SOFTWARE

WAVEVIEW™ Metrology Software

WAVEVIEW™ is the most advanced wavefront measurement and analysis software.

It offers more than 150 features and tools optimized for a wide range of highly demanding applications.

Options:

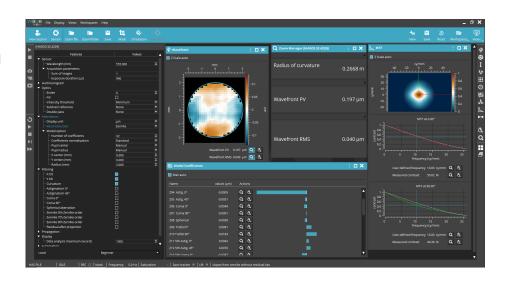
- + Extensions for PSF, MTF, M², Advanced Zernike and Strehl ratio
- + Optional SDK in C/C++, LabVIEW and Python

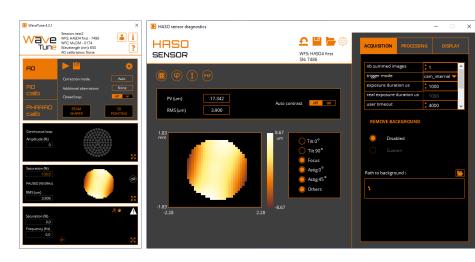
WAVETUNE™ Adaptive Optics Software

WAVETUNE™ is a unique software that seamlessly combines wavefront measurement and correction features with extensive instrument diagnostics. It is perfectly adapted to our HASO wavefront sensors, ILAO STAR, MIRAO and mu-DM deformable mirrors, as well as to a wide range of active components.

Options:

+ Optional SDK in C/C++, LabVIEW and Python





CONTACT US

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