

HASO EUV

WAVEFRONT SENSOR
FOR EUV AND SOFT X-RAY

ACHROMATIC
WAVEFRONT SENSOR

COMPACT
AND VERSATILE

EASY
TO USE



“A groundbreaking and indispensable tool for soft X-ray beam optimization, alignment of X-ray optics and plasma diagnostics over the last 10 years of my research.”

Dr. Marta Fajardo
Instituto de Plasmas e Fusão Nuclear
Instituto Superior Técnico, PORTUGAL

WHY TO BUY

- $\lambda/75$ RMS absolute accuracy at 13 nm
 $\lambda/200$ RMS repeatability
- Optimized for 4-40 nm range (30-300 eV)*
- Patented Hartmann technology
- Suitable for mono- and polychromatic beams
- ~ 600 ms readout time with ROI option
- Hydrocarbon free and compatible with 10^{-7} mbar
- C, LabVIEW and MATLAB compatible core engine SDK of WaveView
- External trigger capability

*HASO EUV wavefront sensors can be optimized for other wavelengths. Contact Imagine Optic for more details: contact@imagine-optic.com

HASO EUV : THE ADVANCED METROLOGY WAVEFRONT SENSOR

Imagine Optic's HASO EUV wavefront sensor, developed in collaboration with LOA laboratory and the SOLEIL synchrotron, is the only device of its kind that offers you the extreme precision and direct measurement functionality needed for today's most demanding laboratory and industrial applications.

- Synchrotron, EUV-FEL, and laser-driven secondary source alignment and characterization
- Micro- and nano-focusing, automatic alignment of EUV optical systems
- Dense plasma diagnostics
- Perfectly adapted for laboratory applications
- Compatible to coherent and non-coherent sources
- Usable for closed- and open-loop adaptive optics

Designed and built in collaboration with our customers to respond their needs as the top priority, the HASO EUV incorporates our patented rotated square technology to offer high spatial resolution and wide dynamic range, making it the ideal choice for EUV lithography, high-harmonic generation, synchrotron and EUV-FEL beam analysis. When used for adaptive optics, the EUV wavefront sensor becomes a powerful tool that allows you to achieve with micro - and nano - focusing, high Strehl ratio and precise control of the focal spot shape.

WaveView SOFTWARE

- HASO EUV is delivered with WaveView (HASO V3.2) the most advanced wavefront measurement and analysis software
- more than 180 functions
- more than 15 years of customer's feedback
- regular updates and constant improvement on new functionalities
- PSF, MTF and M² software options
- WaveKit or SDK package available (C, LabVIEW and MATLAB)

Specifications	EUUV
Aperture dimension	13 x 13 mm ²
Number of sub-apertures dedicated for analysis	72 x 72
Curvature dynamic range	± 0.5 m to ± ∞ (diverging)
Repeatability (rms)	~ λ/200
Wavefront measurement accuracy in absolute mode (rms)	~ λ/75
Wavefront measurement accuracy in relative mode (rms)	~ λ/100
Tilt measurement sensitivity (rms)	0.05 μrad
Focus measurement sensitivity (rms)	< 1.10 ⁻⁵ m ⁻¹
Spatial beam sampling step	~ 180 μm
Minimum readout time	~600 ms (2 MHz digitization)
Working photon energy (wavelength)	30 eV - 300 eV (4 nm - 40 nm)
Compliant vacuum (hydrocarbon free)	10 ⁻⁷ mbar
Power supply	included
Dimensions	Ø 115 mm, L 270 mm
Interface	USB 2.0

www.imagine-optic.com