



HASO BROADBAND

Wavefront sensor
The Workhorse

From UV to IR
Versatile
Alignment-free

 compatible



HASO BROADBAND +

**A great choice
for almost any lab
or industrial application,
the HASO BROADBAND
is Imagine Optic's
most versatile
wavefront sensor.**

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



Compatible with the
**Optical Engineer
Companion** modular
system: easily combine
the accessories you
need.

APPLICATIONS

Successfully used in the most demanding applications in optical metrology, microscopy, and laser diagnostics, the HASO BROADBAND performs multiple functions :

- + Quantify the aberrations of an optical system
- + Align the system to ensure that it performs at its best
- + Predict the performance of optical systems in terms of focusing capability or imaging quality
- + Quantify the effects of temperature and gravity on system performance
- + Verify that the optics comply with specifications
- + Measure directly the optical system's wavelength dependency
- + Drive a wavefront corrector to rectify system aberrations
- + Check whether the optical mount overly distorts the optics

FEATURES

- + Easy wavefront measurement on the whole spectrum of the sensor: 350 - 1100 nm with no wavelength dependency
- + Direct wavefront acquisition of converging and diverging F/5 beams with an accuracy of about $\lambda/100$ RMS, including astigmatism and high-order aberrations
- + Beam collimation with an accuracy better than 300 m radius of curvature
- + Gaussian beam measurement down to $1/e^4$ (contrast of 100)



SPECIFICATIONS*

OPERATING SPECS

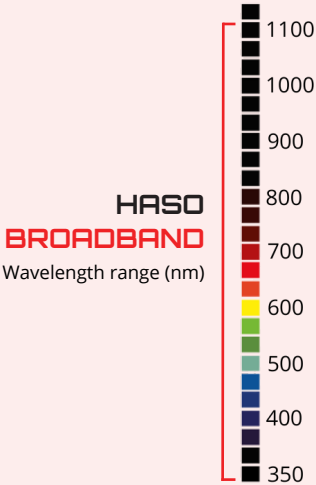
Aperture dimension	6,9 x 5,1 mm²
Number of microlenses	68 x 50
Maximum acquisition frequency	58 Hz (USB 3.0) or 30 Hz (with GigE converter)
Calibrated wavelength range	350 - 1100 nm
Minimum power	0,15 nW
External trigger	TTL signal
Operating system	Windows 10 & 11

OPTICAL SPECS

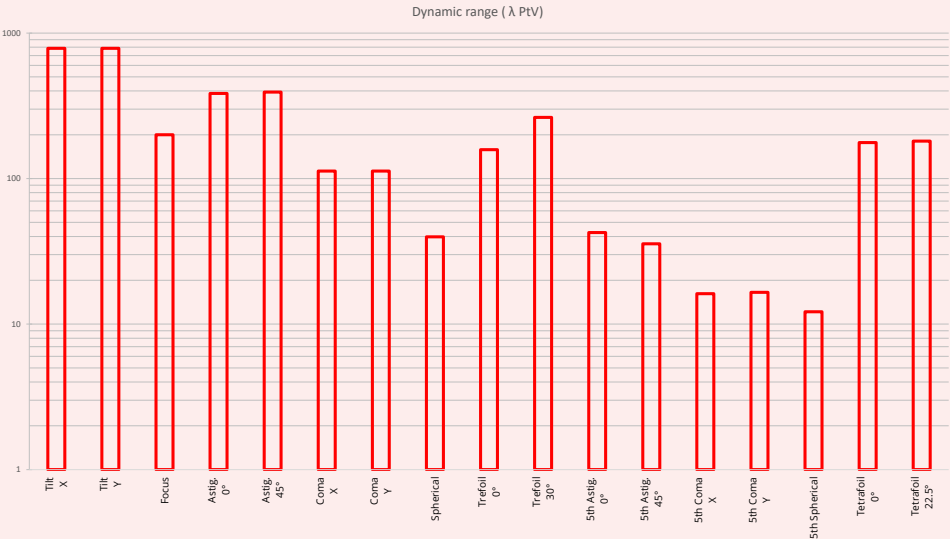
Repeatability	< λ/200 RMS
Absolute wavefront measurement accuracy	≤ 6 nm RMS
• λ between 350-600 nm	~ λ/100 RMS
• λ between 600-1100 nm	~ 100 μm
Spatial sampling	± 0.008 m to ± ∞
Local radius of curvature dynamic range	

MISC

Dimensions (Height x Width x Length)	42 x 47 x 60 mm³ (USB 3.0)
Weight	200 g
Working temperature	15 - 30 °C
Interface	USB 3.0 or optional GigE converter
Power consumption	3,1 W

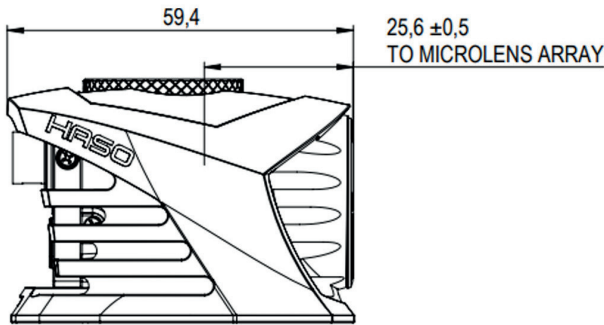
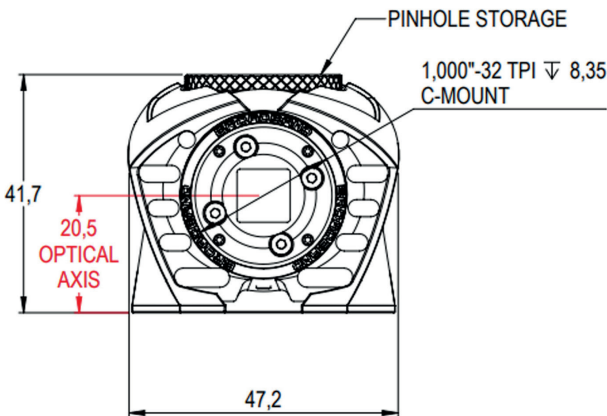


HASO BROADBAND
Dynamic range at λ = 635 nm



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

DIMENSIONS** (mm)



**USB 3.0 model

SOFTWARE

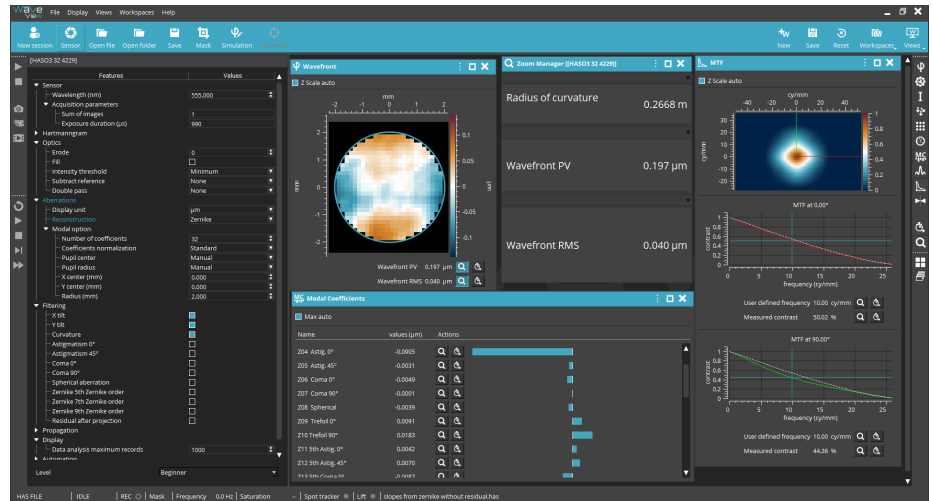
WAVEVIEW™ Metrology Software

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, Strehl ratio and advanced Zernike
- + Optional SDK in C/C++, LabVIEW and Python



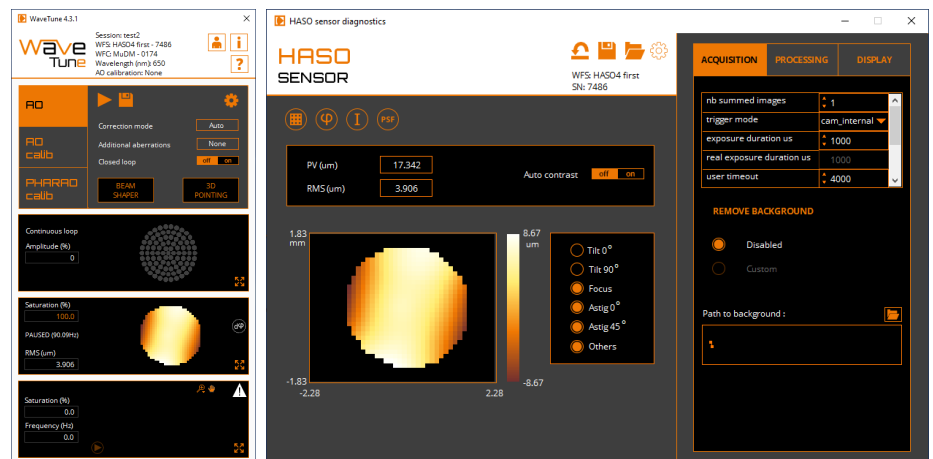
WAVETUNE™ Adaptive Optics Software

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

Imagine Optic Headquarters
18, rue Charles de Gaulle
91400 ORSAY · France
Phone +33 (0)1 64 86 15 60
sales@imagine-optic.com
www.imagine-optic.com

