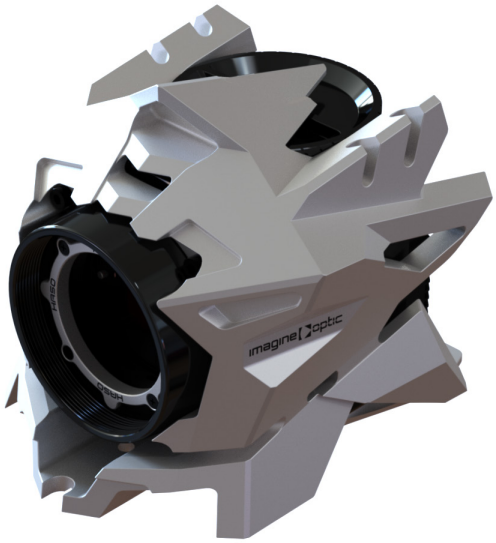
LIFT LP

Wavefront sensor
The cyclops

Ultra-High spatial resolution
Large analysis pupil
High accuracy



imagine optic

LIFT LP

With the LIFT LP, Imagine Optic is extending its portfolio with a large pupil sensor, bringing convenience to the testing of large beams.

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

APPLICATIONS

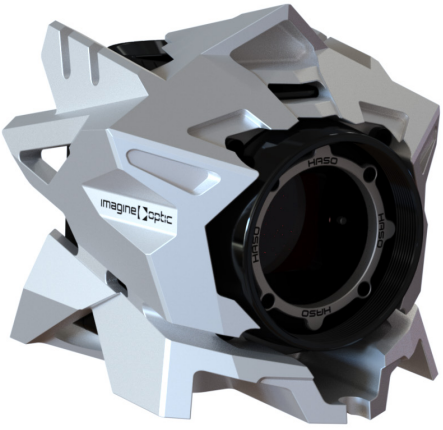
The LIFT LP is the perfect tool for direct characterization of relatively large optical beams without the need for relay optics to adapt the beam to the metrology tool. It is easier, faster to implement and more accurate: no more added optics means no more added aberrations and no need for specific setup calibration.

+ Laser beam testing, accurate laser collimation
+ Laser optical alignment and optimization to allow optimal M2-parameter values
+ Characterization of optics, lens, protective windows, mirror with transmitted wavefront error (TWE) and surface shape in reflection (SFE) using the same wavefront sensor and over a large spectral bandwidth
+ Production QC, specifications check of purchased optics prior to integration
+ Alignment of optical systems, based on live aberration information

FEATURES

LIFT LP packs :

+ Ultra-high spatial resolution of 512 x 512, allowing characterization over several hundreds of Zernike Polynomilas
+ 22 mm large analysis pupil for direct wavefront characterization without relay optics or beam conditioning
+ Accuracy of λ/100 RMS permitting small defects detection
+ Dynamic range superior to 1000 λ for direct wavefront acquisition of converging and diverging beams



SPECIFICATIONS*

OPERATING SPECS

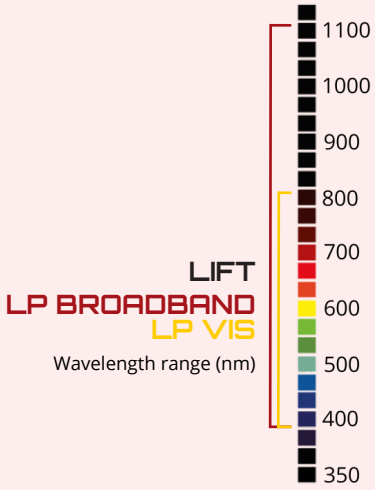
Aperture dimension	22 x 22 mm²
Phase points resolution	512 x 512
Maximum acquisition frequency	10 Hz (10GigE)
LP BROADBAND calibrated wavelength range	400 - 1100 nm
LP VIS calibrated wavelength range	400 - 800 nm
Minimum power	0.7 nW
External trigger	TTL signal
Operating system	Windows 11 & 10

OPTICAL SPECS

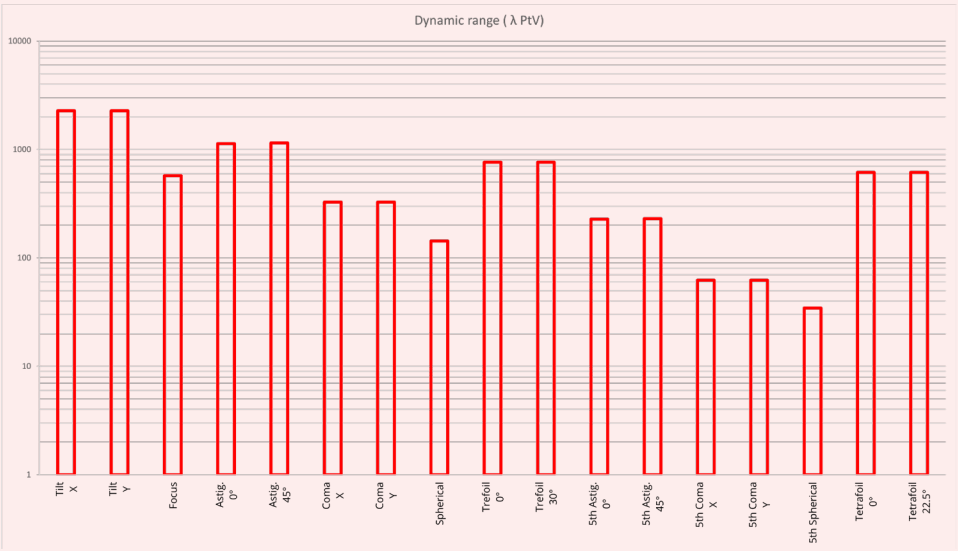
Repeatability	< λ/200 RMS
Absolute wavefront measurement accuracy	λ/100 or 6 nm RMS
Spatial sampling	~ 170 µm
Local radius of curvature dynamic range	± 0.02 m to ± ∞
Beam aperture (f-number)	> 5

MISC

Dimension (Height x Width x Length)	100.7 x 104.5 x 121 mm³
Weight for USB version	800 g
Working temperature	15 - 30 °C
Interface	10GigE
Power consumption	14 W (dep. on operating mode)

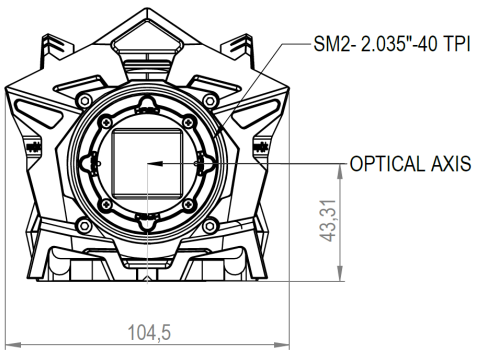


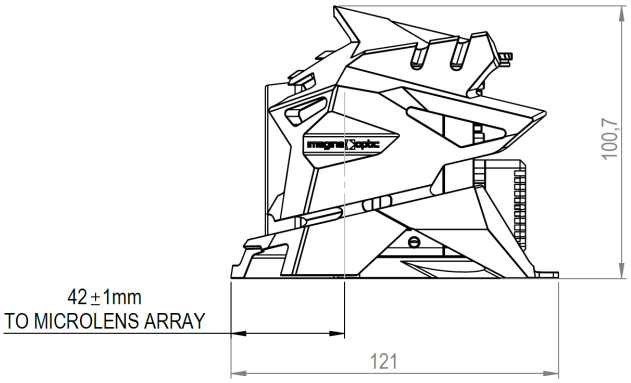
LIFT LP
Dynamic range at λ = 635 nm



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

DIMENSIONS (mm)





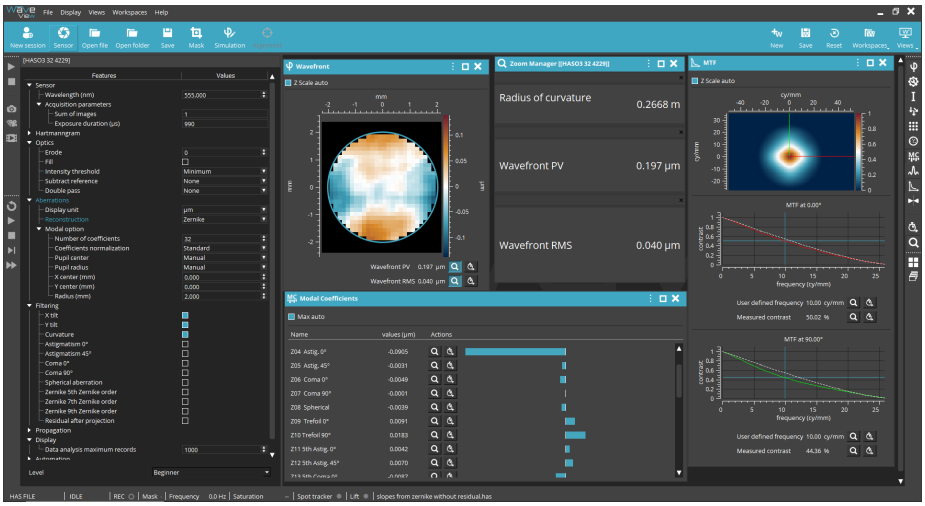
SOFTWARE

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

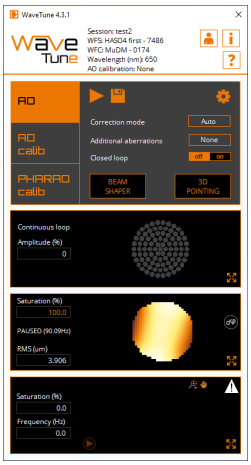


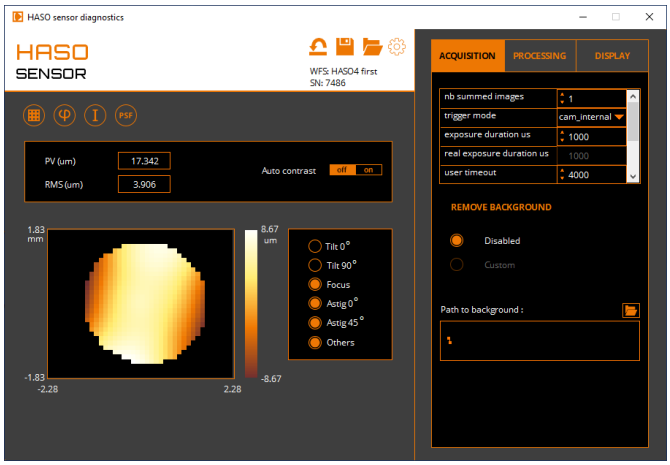
WAVETUNE™
Adaptive Optics Software

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





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