LIFT
272

Wavefront sensor
The Polymath

Ultra-high spatial resolution
High accuracy
Alignment-free

NEO compatible

imagine
[ ] optic
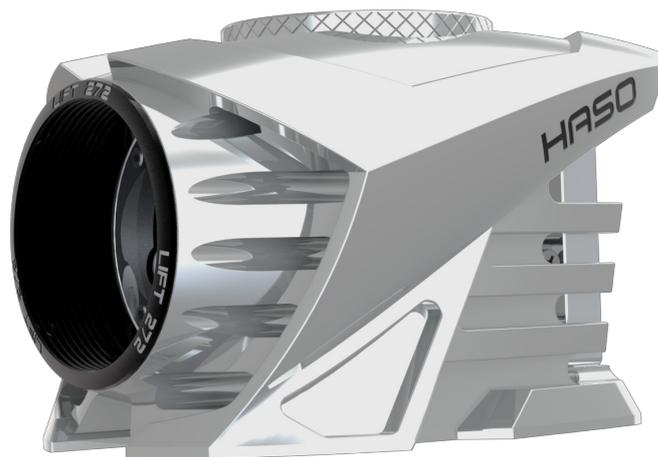
LIFT 272 +

The LIFT 272 provides ultra-high resolution and broadband for maximum precision and versatility.

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 LIFT 272 performs multiple functions :
+ Characterize complex optics, including meta-surface and freeform optics
+ Quantify laser impact (LIDT)
+ Perform surface characterization on high and middle frequencies mirrors
+ Predict the performance of optical systems in terms of focusing capability or imaging quality
+ Quantify the effects of temperature and gravity on system performance
+ Drive a wavefront corrector to correct for system aberrations

FEATURES

The LIFT 272 enables you to perform multiple functions by combining :
+ Ultra-high spatial resolution of 272 x 200, allowing characterization over several hundreds of Zernike polynomials
+ Accuracy of $\lambda/100$ 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	7.0 x 5.2 mm²
Phase points resolution	272 x 200
Number of microlenses	68 x 50
Maximum acquisition frequency	58 Hz (USB 3.0) or 30 Hz (with GigE converter)
Calibrated wavelength range	400 - 750 nm
Minimum power	0.15 nW
External trigger	TTL signal
Operating system	Windows 10 & 11

OPTICAL SPECS

|	
Repeatability	$< \lambda/200$ RMS
Absolute wavefront measurement accuracy	$\lambda/100$ or 6 nm RMS
Spatial sampling	$\sim 100~\mu m$
Local radius of curvature dynamic range	± 0.010 m to $\pm \infty$

MISC

Dimension (Height x Width x Length)	42 x 47 x 60 mm³ (USB 3.0)
Weight for USB version	185 g
Working temperature	15 - 30 °C
Interface	USB 3.0 or optional GigE converter
Power consumption	3.6 W

LIFT 272

Wavelength range (nm)

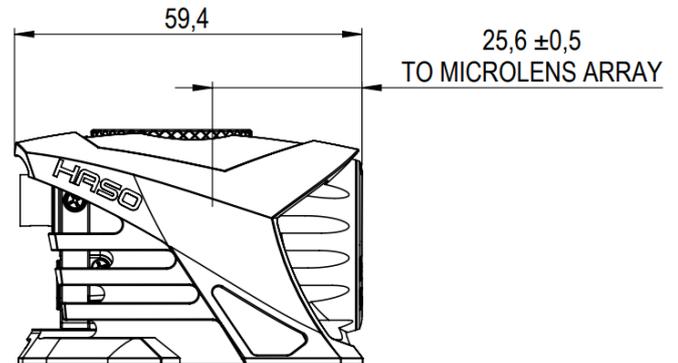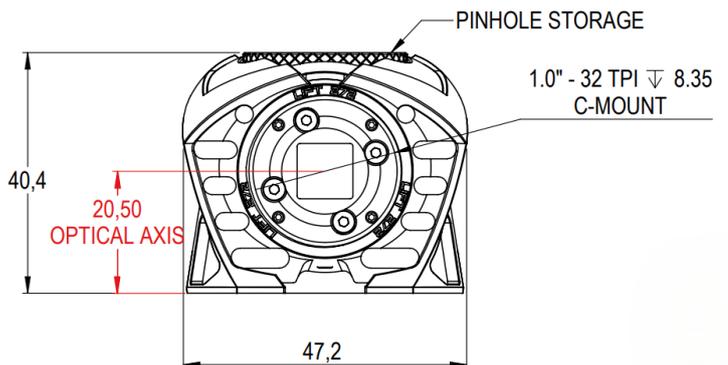1100 1000 900 800 700 600 500 400 350
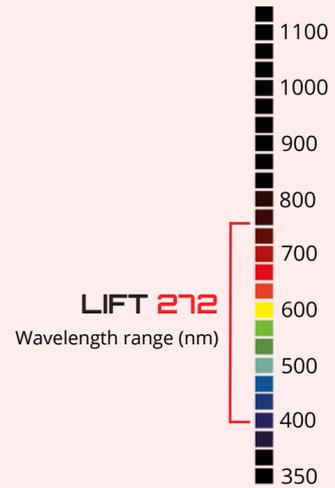
LIFT 272

Dynamic range at λ = 635 nm

Dynamic range (λ PtV)
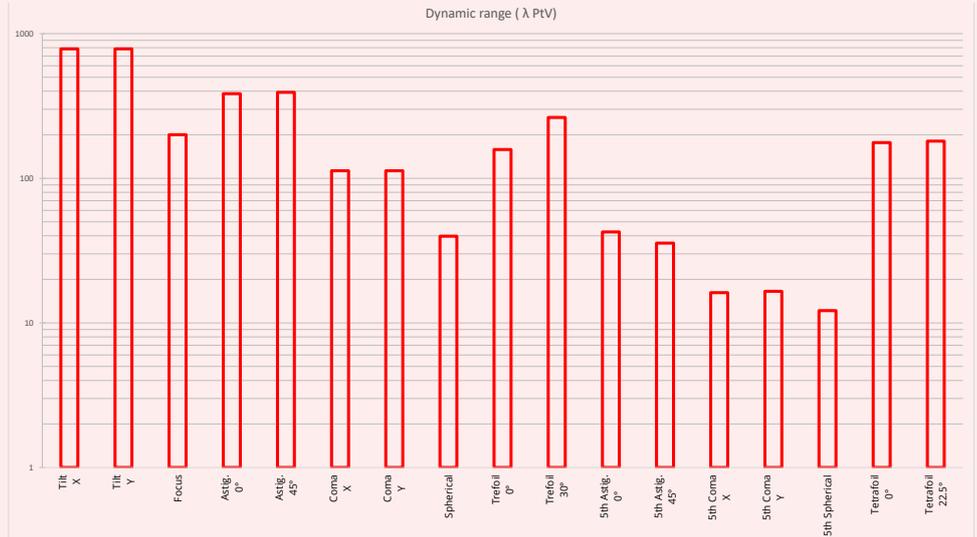
*Subject to changes without further notice
/!\ Acquisition & processing frequencies depend on computer

DIMENSIONS** (mm)

PINHOLE STORAGE

1.0" - 32 TPI ⊽ 8.35
C-MOUNT

40,4

20,50
OPTICAL AXIS

47,2

59,4

25,6 ±0,5
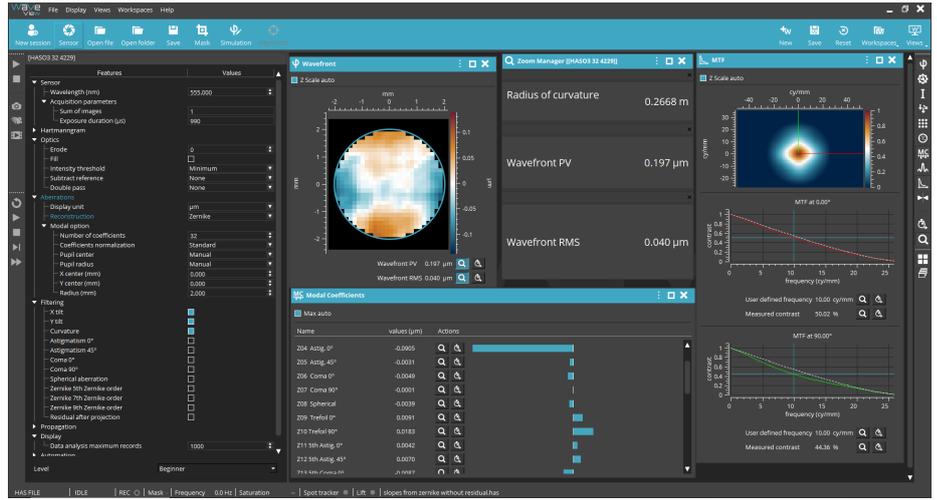TO MICROLENS ARRAY

**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
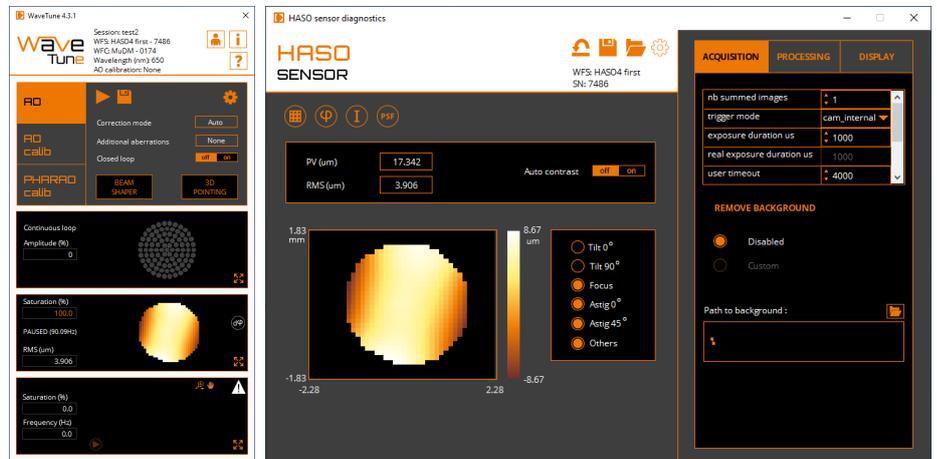
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