# HASO
## LIFT 272

The Optical Metrology
**Polymath**

High Spatial Resolution
Alignment-Free
Wavefront Sensor

NEO compatible



imagine Optic
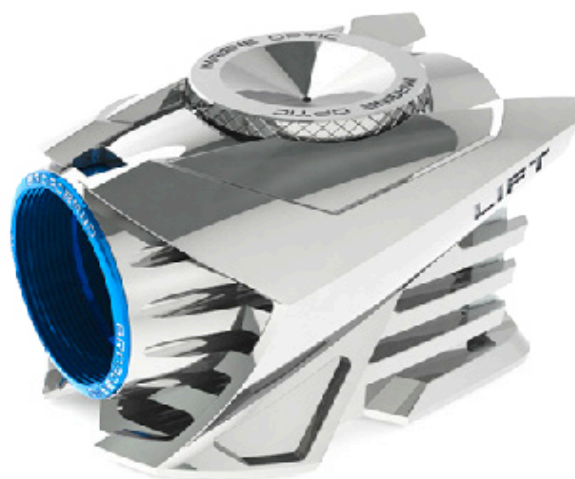
# HASO LIFT 272

**The HASO LIFT 272 provides high-resolution and broadband for maximum precision and versability.**

The second generation was released in 2020, and features the new SpotTracker technology. It provides absolute wavefront and tilt information, eliminating alignment requirements.

This instrument is compatible with the Optical Engineer Companion metrology system.

## APPLICATIONS

Successfully used in the most demanding of applications in optical metrology, microscopy, and laser diagnostics, the HASO Lift 272 enables you to :

+ Quantify the optical system's aberrations

+ Align the system to ensure that it performs at its best

+ Predict the optical system's performance in terms of focalization capability or imaging quality

+ Quantify the effects of temperature and gravity on the system's performance

+ Verify that the optics comply with specifications

+ Directly measure the optical system's wavelength dependency

+ Pilot a wavefront corrector to change the system's aberrations

+ Check whether the optical mount overly distorts the optics

## FEATURES

The HASO Lift 272 enables you to perform multiple functions by combining :

+ A spatial resolution of 680 x 504, allowing characterization over several hundreds of Zernike polynomials

+ An accuracy of λ/100 rms permitting small defects detection

+ A dynamic range superior to 1000 λ for direct wavefront acquisition of converging and diverging beams

+ Our patented technology for simultaneous and independent

# SPECIFICATIONS

## OPERATING SPECS

| | |
|---|---|
| Aperture dimension | 7.0 x 5.2 mm² |
| Number of microlenses | 68 x 50 |
| Phase points resolution | 272 x 200 |
| Maximum acquisition frequency | 20 Hz |
| Calibrated wavelength range | 400 - 800 nm |
| Mimimum power | 0.15 nW |
| External trigger TTL signal | |

## OPERATING SYSTEM          **Windows 7 & 10**

## OPTICAL SPECS

| | |
|---|---|
| Repeatability | $< \lambda/200$ rms |
| Wavefront measurement accuracy in absolute mode | |
| · $\lambda$ between 350-600 nm | $\leq 6$ nm rms |
| · $\lambda$ between 600-1100 nm | $\sim \lambda/100$ rms |
| Spatial sampling | $\sim 105$ µm |
| Tilt dynamics range | $> \pm 3°$ |
| Focus dynamics range | $\pm 0.010$ m to $\pm \infty$ |

## MISC

| | |
|---|---|
| Dimension/weight for USB version | 42 x 47x 60 mm³ / 185 g |
| Working temperature | 15 - 30 °C |



HASO LIFT 272
Wavelenght range (nm)
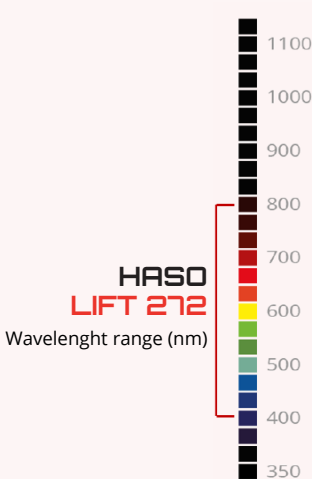
### HASO LIFT 272
Dynamic range
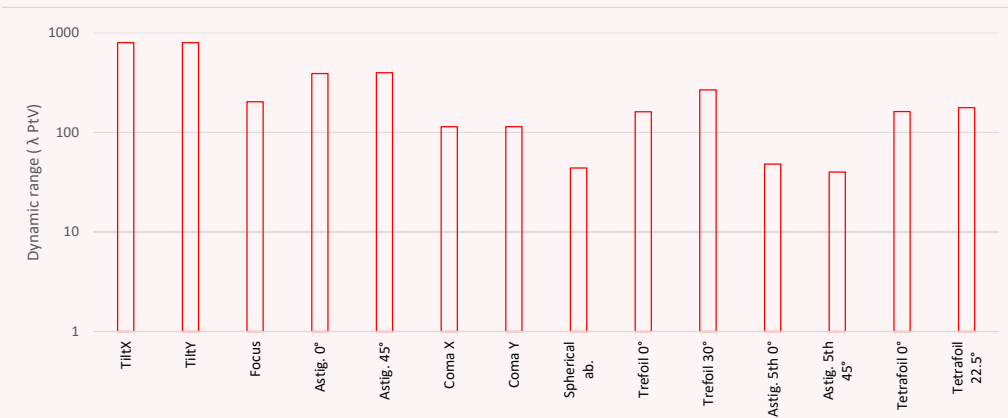


# DIMENSIONS (mm)
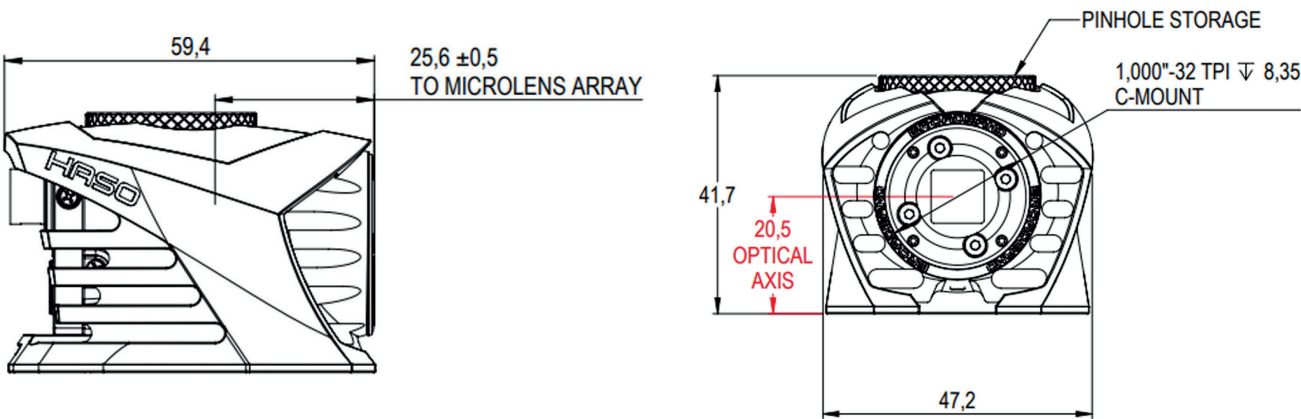
# SOFTWARE

## WAVEVIEW 4.3
## 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.

+ Extensions for PSF, MTF, Msquare and Strehl ratio

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

+ Windows10 64 bits compatible
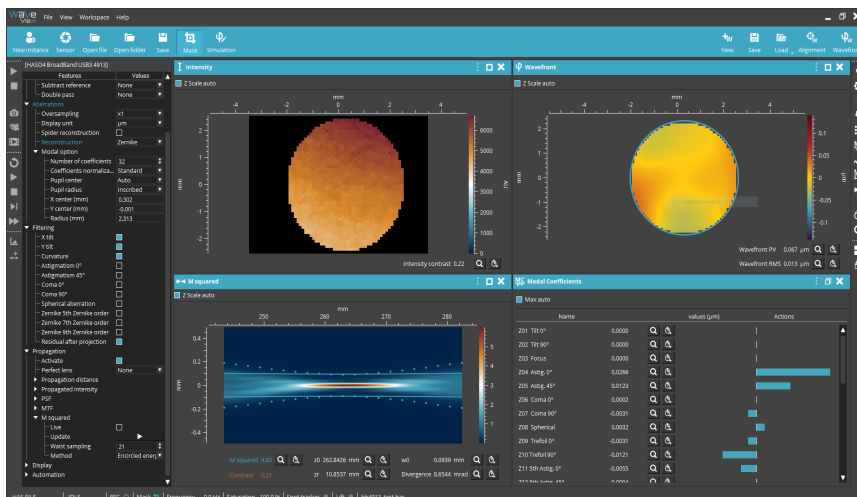


## WAVETUNE 4.3
## Adaptive Optics Software

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, and MIRAO deformable mirror, as well as to a wide range of active components.

+ Compatibility with many deformable mirrors

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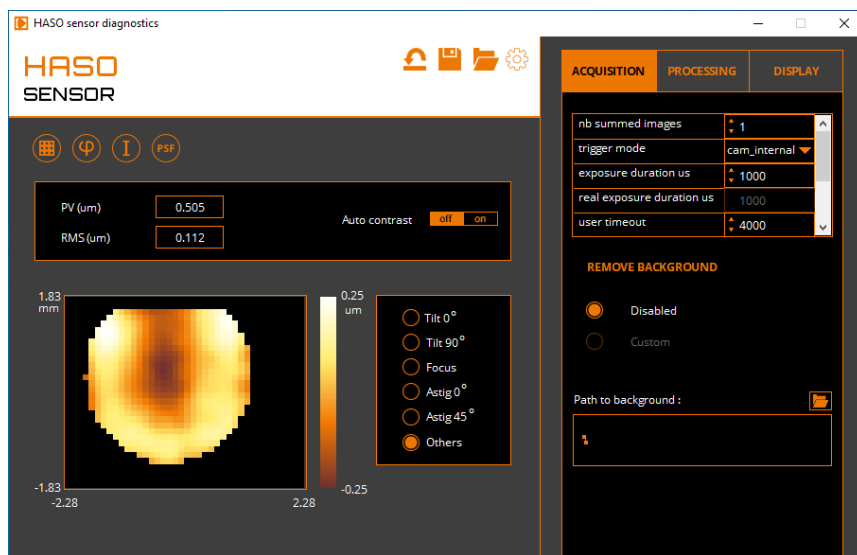


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