

# **HASO** LIFT 272

Wavefront sensor **The Polymath** 

Ultra-high spatial resolution High accuracy Alignment-free









# HASO LIFT 272 $\,+\,$

The HASO LIFT 272
provides ultrahigh 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 HASO 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 HASO 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  $1000\,\lambda$  for direct wavefront acquisition of converging and diverging beams



### **SPECIFICATIONS\***

### **OPERATING SPECS**

Aperture dimension
Phase points resolution
Number of microlenses
Maximum acquisition frequency
Calibrated wavelength range
Minimum power

Minimum power External trigger Operating system

### **OPTICAL SPECS**

Repeatability
Absolute wavefront measurement accuracy
Spatial sampling

Tilt dynamic range Focus dynamic range

### MISC

Dimension (Height x Width x Length) Weight for USB version Working temperature

Interface

Power consumption

7.0 x 5.2 mm<sup>2</sup> 272 x 200 68 x 50

20 Hz (USB 3.0) or 30 Hz (GigE)

400 - 750 nm 0.15 nW TTL signal Windows 10

< λ/200 RMS

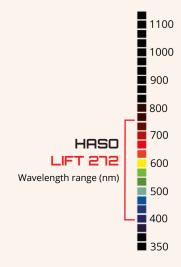
 $\lambda$ /100 or 6 nm RMS

 $\sim 100 \, \mu m$ >  $\pm 3^{\circ}$ 

± 0.010 m to ± ∞

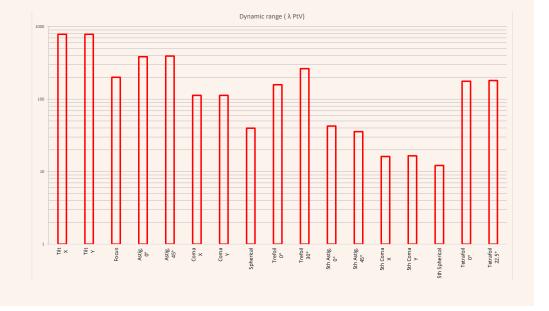
42 x 47 x 60 mm<sup>3</sup> (USB 3.0)

185 g 15 - 30 °C USB 3.0 or GigE 3.6 W



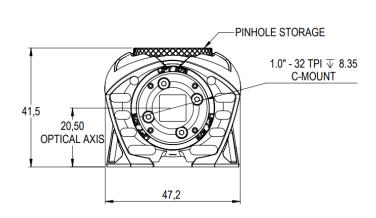
### HASO LIFT 272

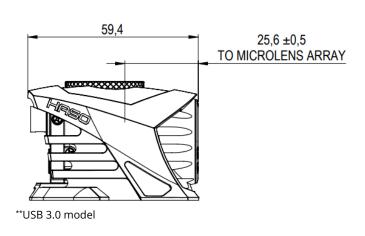
Dynamic range at  $\lambda = 635 \text{ nm}$ 



\*Subject to changes without further notice

## **DIMENSIONS\*\* (mm)**





### **SOFTWARE**

### WAVEVIEW™ Metrology Software

WAVEVIEW<sup>™</sup> 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 and Strehl ratio
- + Optional SDK in C/C++, LabVIEW and Python

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### 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





