

# HASO

## SWIR LIFT 160

### The Prodigy

160 x 128 phase points resolution

1050-1700 nm

Alignment free

 compatible



# HASO SWIR LIFT 160

A great choice for the most demanding SWIR optical metrology applications, the HASO SWIR LIFT 160 wavefront sensor provides the highest resolution in SWIR, and advanced features such SpotTracker for alignment.

It also instantly combines with any other compatible instrument and accessory in the Optical Engineer Companion range.

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



## APPLICATIONS

- + Optical manufacturing metrology
- + Complex optics Characterization
- + Middle frequencies mirror surface characterization
- + Optical quality control, metrology (LIDAR, free space communication, Automotive, Space and defense)
- + Prediction of an optical system performance in terms of focalization capability or imaging quality
- + Pilot a wavefront corrector to control system's aberrations
- + Quantification of the effects of temperature and gravity on the performance of an optical system

## FEATURES

Successfully used in the most demanding applications in optical metrology, laser diagnostics and adaptive optics, the HASO SWIR LIFT 160 performs multiple functions :

- + Direct wavefront acquisition of highly converging and diverging beams with an accuracy of  $\lambda/100$  rms, including astigmatism and high-order aberration, and many other parameters, making for the perfect instrument for any complex optics alignment.
- + Beam collimation with sensitivity  $> 1$  km radius of curvature
- + Control and adjustment of axial laser beam deviation  $> 3\mu\text{rad}$  rms
- + Complex optics characterization in single or double path configuration in combination with R-FLEX2 metrology systems or RFLEX LA metrology platforms.
- + 3D MTF measurements
- + Simultaneous and independent measurements of phase and intensity (patented)

## SPECIFICATIONS

### OPERATING SPECS

Aperture dimension	9.30 x 7.44 mm <sup>2</sup>
Phase sampling	160 x 128
Maximum acquisition frequency	150 Hz
Calibrated wavelength range	1.05 - 1.70 $\mu\text{m}$
Minimum power	1 pW
External trigger TTL signal	

### OPERATING SYSTEM

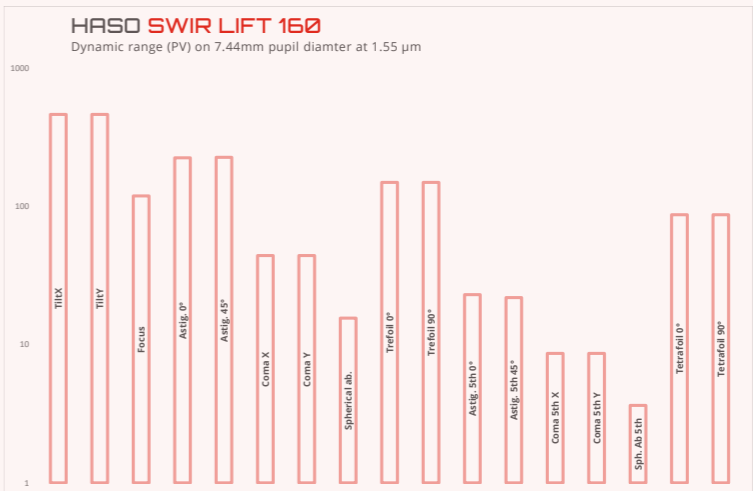
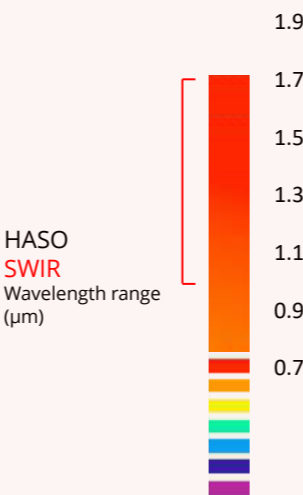
Windows 10

### OPTICAL SPECS

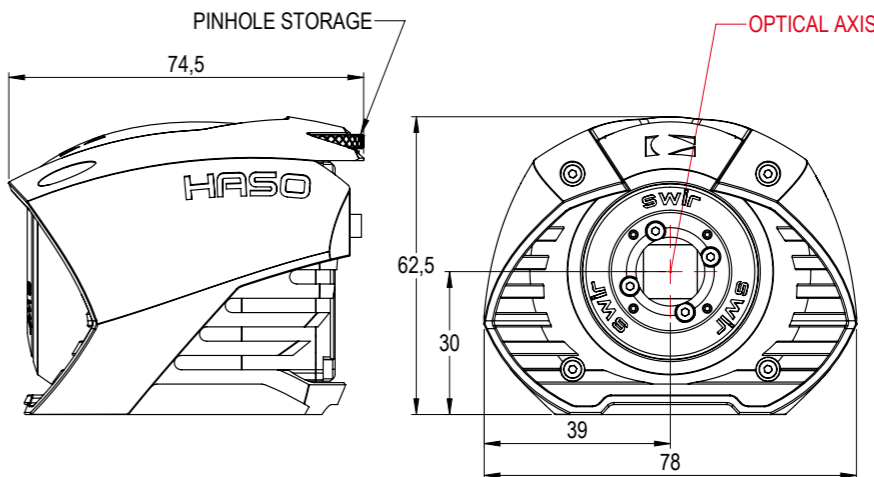
Repeatability	$\lambda/200$ rms
Absolute wavefront measurement accuracy	$\lambda/100$ rms
Spatial sampling	58 $\mu\text{m}$
Tilt dynamics range	$> \pm 3^\circ$
Focus dynamics range	$\pm 0.040$ m to $\pm \infty$

### MISC

Dimension/weight for USB version	75 x 78x 63 mm <sup>3</sup> / 250g
Working temperature	15 - 30 $^\circ\text{C}$
Interface / Power consumption	USB 3.0 / $<5\text{W}$



## DIMENSIONS (mm)



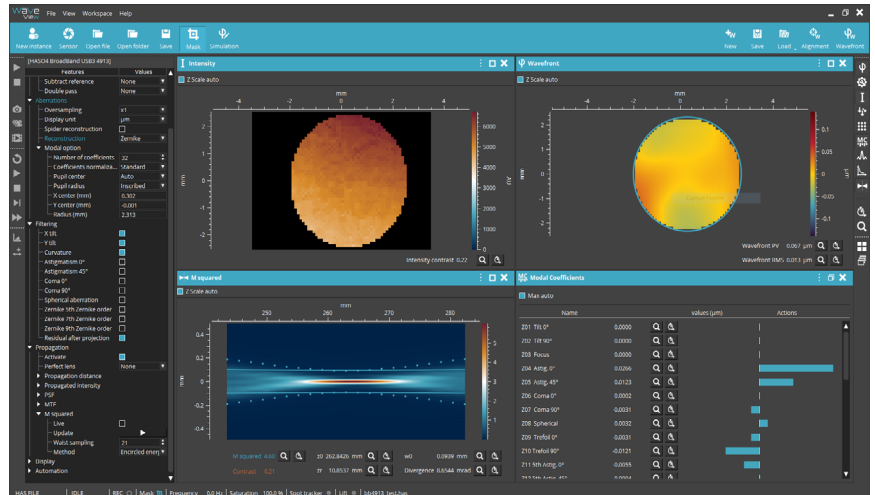
## SOFTWARE

### 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 and  $M^2$
- + Optional SDK in C/C++, LabVIEW and Python
- + Windows10, 64bits compatible

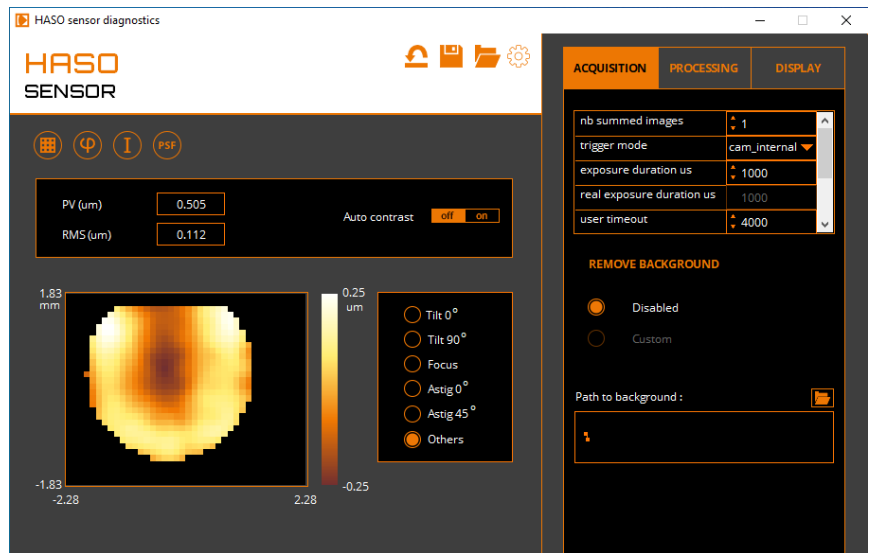


### WAVETUNE 4.3 Adaptive Optics Software

WaveTune is a unique application that seamlessly combines wavefront measurement and correction features with extensive instrument diagnostics.

It is perfectly adapted to our HASO wavefront sensors, ILAO Star, and MIRA0 deformable mirrors, as well as to a wide range of active components.

- + Compatibility with many deformable mirrors
- + Optional SDK in C/C++, LabVIEW and Python



## CONTACT US

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