

# HASO™

HP



*Imagine Optic™*

# HASO<sup>TM</sup>

## HP



HASO HP Shack-Hartmann wavefront sensors provide sub-nanometric precision with the standard functionalities that HASO customers have come to rely on, including absolute measurement, wide dynamic range, unequalled accuracy and insensitivity to vibration.

Perfectly compatible with our LIP<sup>TM</sup> and  $\Theta X \Theta Y$ <sup>TM</sup> Rotation Stage accessories, HASO HP allows you to avoid using expensive components including null lenses or CGH matrixes, and is ideal for characterizing mirrors and catadioptric systems as well as aligning high-precision optical systems.

Aperture dimension	13.5 x 13.5 mm <sup>2</sup>
Number of microlenses <sup>1</sup>	30 x 30
Tilt dynamic range	> ± 0.5 °
Focus dynamic range	± 0.35 m to ± ∞
Measurement dynamic (specified in local curvature)	± 0.30 m
Repeatability (rms)	< λ/3000
Wavefront measurement accuracy in absolute mode (rms) <sup>2</sup>	~ λ/1000
Wavefront measurement accuracy in relative mode (rms) <sup>3</sup>	~ λ/2000
Tilt measurement sensitivity (rms)	0.05 μrad
Focus measurement sensitivity (rms)	5.10 <sup>-4</sup> m <sup>-1</sup>
Spatial resolution	~ 450 μm
Maximum acquisition frequency	20 Hz
Processing frequency	2 - 10 Hz
Working wavelength range	350 - 500 nm
Calibrated wavelength range	390 - 430 nm
Working temperature	20 - 25°
Dimensions / weight	90 x 100 x 210 mm / 1500 g
Power supply	+5, -5, -15, 28 V / 20 W
Interface	Giga Ethernet

Data represented here is based on the HeNe wavelength 633 nm. (1) other configurations are available. (2) wavefront as seen by the analyser. performance kept on the whole band. (3) difference between the real wavefront and a reference wavefront obtained in similar conditions (10 λ of shift max).

To learn more and to find a distributor near you, please visit [imagine-optic.com](http://imagine-optic.com) or call +33 (0)1 64 86 15 60.



[imagine-optic.com](http://imagine-optic.com)