

- The ShaH-0620 - industrial Shack-Hartman wavefront sensor is intended for a wide range of applications including fast and precise quality control of optical elements, airflow analysis, measurement of laser beam parameters, etc.
- A special high-precision algorithm for locating hartmann image spots centers provides very accurate measurements even in difficult viewing conditions.
- The SDK (C++) allows to operate all functions of the sensor and to achieve easy integration with user software.

VISIONICA

WaveFront Sensor ShaH-0620

### TECHNICAL SPECIFICATIONS. Modification A (B)

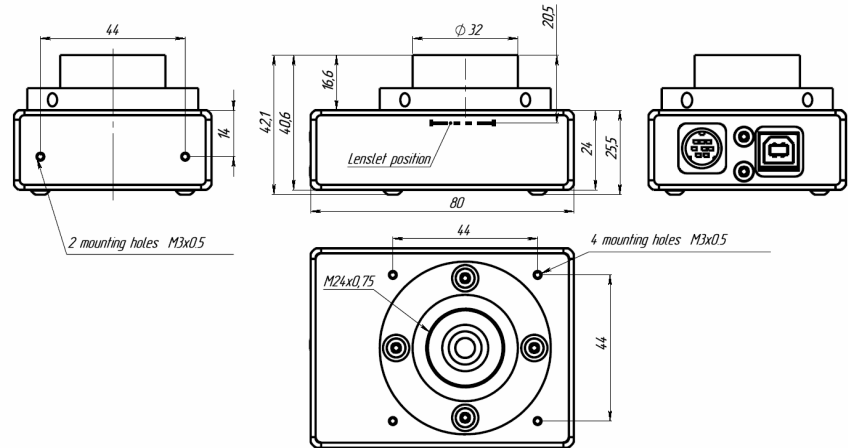
Aperture diameter	6 mm
Spatial resolution	150 (500) $\mu\text{m}$
Number of points for analysis	1500 (140)
Maximum tilt normal/extended mode	$\pm 25/75$ ( $\pm 50/150$ ) mrad
Minimum curvature	$\pm 0.12$ ( $\pm 0.06$ ) m
Repeatability RMS	0.4 (0.8) nm
Absolute accuracy RMS	$\lambda/100$ *
Relative accuracy RMS (at maximum angular source size <10 (3) mrad)	$\lambda/1800$ ( $\lambda/900$ )
Relative measurement accuracy P-V (within 90% of input aperture)	$\lambda/450$ ( $\lambda/220$ )
Tilt measurement sensitivity	0.3 (0.5) $\mu\text{rad}$
Curvature measurement sensitivity	5.8 (3) $\mu\text{m}$
Acquisition frequency normal/binning mode	20/60 Hz
Processing frequency	up to 60 Hz
Hartmann image acquisition	8/10 bit
Working wavelength	350-1100 nm
Calibrated waveband	400 nm
Maximal exposure (at wavelength 720 nm)	13 (0.3) $\text{nJ}/\text{cm}^2$
Working temperature	from 0 to +40 °C
Weight	250 g
Dimensions	80x60x40 mm

\* Better accuracy available upon request



Interface/power supply	IEEE1394
Synchronization connector	Mini DIN
Operating system	Windows 2000/XP/Vista/7/8 (32/64-bit)
Output data	<ul style="list-style-type: none"> <li>• Sequence of raw hartmann images</li> <li>• Spot shift map</li> <li>• Wavefront aberration map (3D plot, 2D projection, synthesized interferogram, up to 55 Zernike polynomials)</li> <li>• Defocus/Curvature/Astigmatism</li> <li>• PSF (point spread function)</li> <li>• MTF (modulation transfer function)</li> <li>• Strehl ratio</li> <li>• M2 factor</li> <li>• Gauss-Hermite modes</li> <li>• Turbulence parameters <math>C_n^2</math>, <math>R_0</math> and other</li> </ul>

DIMENSIONS



SPECTRAL RESPONSIVITY

