



- The ShaH-1001000 - 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.

## Wavefront Sensor ShaH-1001000

TECHNICAL SPECIFICATIONS	
Aperture dimension (diameter)	100 mm
Spatial resolution	5 mm
Number of points for analysis	380
Maximum tilt normal	±1.5 mrad
Minimum measured curvature	±32 m
Repeatability RMS	1.7 nm
Absolute measurement accuracy RMS	$\lambda/100$ *
Relative measurement accuracy RMS (At maximum angular source size <0.35 mrad)	$\lambda/400$
Relative measurement accuracy P-V (Within 90% of input aperture)	$\lambda/100$
Tilt measurement sensitivity	70 nrad
Curvature measurement sensitivity	370 km
Acquisition frequency	1000 Hz
Processing frequency	up to 1000 Hz
Hartmann image acquisition	8/10 bit
Working wavelength	350-1100 nm
Calibrated waveband	400 nm
Maximal exposure (at wavelength 700 nm)	0.002 nJ/cm <sup>2</sup>
Working temperature	10-+40 °C
Weight	15 kg
Dimensions (LxHxW)	304x230x625 mm
Interface	CameraLink
Alignment camera connector	USB

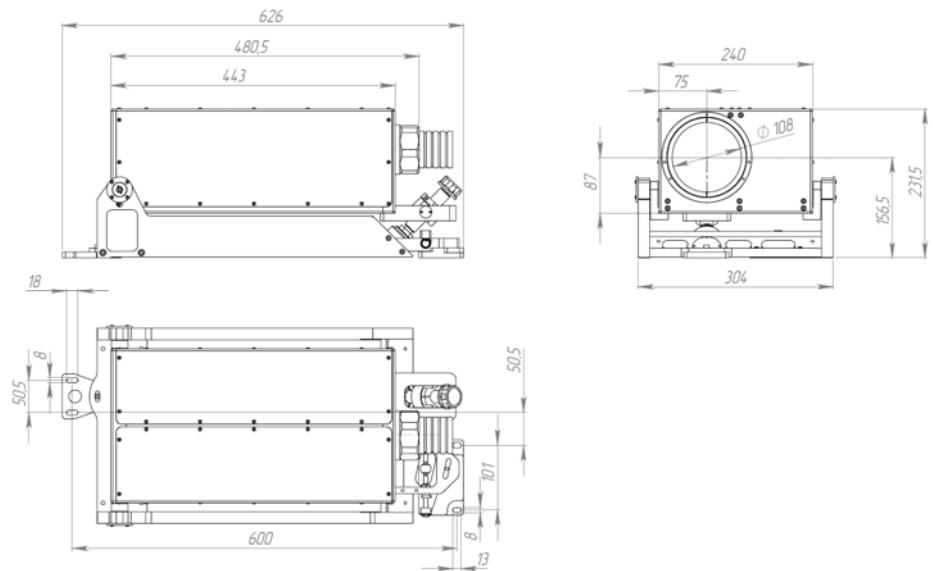


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TECHNICAL SPECIFICATIONS	
Operating system	Windows 2000/XP/Vista
Output data	<ul style="list-style-type: none"> <li>• Sequence of raw hartmann images</li> <li>• Spot shift map</li> <li>• Wavefront aberration map (3D plot, 2D projection, synthesized interferogram, up to 55 Zernike polynomials)</li> <li>• Measurement error map</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, R_0</math></li> </ul>

\* Better accuracy available upon request

MECHANICAL DIMENSIONS



SPECTRAL RESPONSIVITY

