



- The ShaH-1127 - 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-1127

## TECHNICAL SPECIFICATIONS

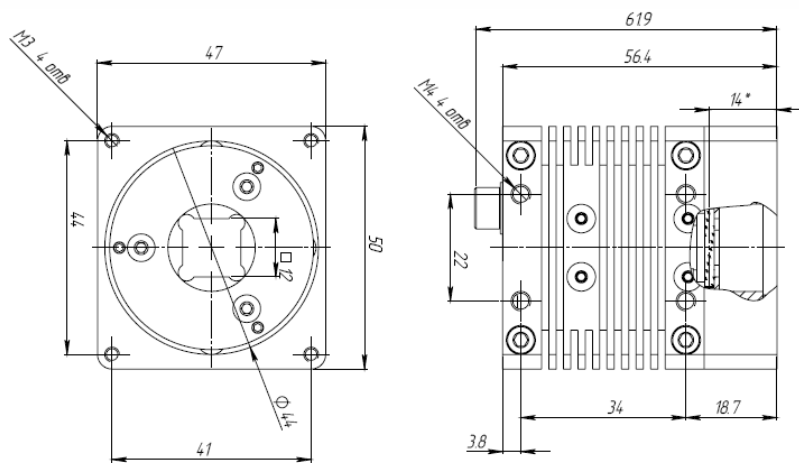
Aperture diameter	11 mm
Spatial resolution	150 $\mu$ m
Number of points for analysis	5100
Maximum tilt	$\pm 25$ mrad
Minimum curvature	$\pm 0.22$ m
Repeatability RMS	0.6 nm
Absolute accuracy RMS	$\lambda/50$ *
Relative accuracy RMS (at maximum angular source size $< 0.10$ mrad)	$\lambda/1100$
Relative measurement accuracy P-V (within 90% of input aperture)	$\lambda/250$
Tilt measurement sensitivity	0.22 $\mu$ rad
Curvature measurement sensitivity	12 km
Acquisition frequency	27 Hz
Exposure	41 $\mu$ s – 153 s
Hartmann image acquisition	8/10 bit
Working wavelength	350-1100 nm
Calibrated waveband	300 nm
Maximal exposure (at wavelength 670 nm)	0.6 nJ/cm <sup>2</sup>
Working temperature	from +5 to +45 °C
Weight	240 g
Dimensions	50x50x65 mm

\* Better accuracy available upon request



Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Power	PoE/12 V - 24 V
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

