



- The ShaH-10025-IR - 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.

## TECHNICAL SPECIFICATIONS

Aperture diameter	100 mm
Spatial resolution	8.3 mm
Number of points for analysis	135
Maximum tilt normal/extended mode	$\pm 1.2$ mrad
Minimum curvature	$\pm 42$ m
Repeatability RMS	2 nm
Absolute accuracy RMS	$\lambda/100$ *
Relative accuracy RMS (at maximum angular source size $< 2$ mrad)	$\lambda/4000$
Relative measurement accuracy P-V (within 90% of input aperture)	$\lambda/1000$
Tilt measurement sensitivity	0.08 $\mu$ rad
Curvature measurement sensitivity	300 km
Acquisition frequency	25/50 Hz
Processing frequency	up to 50 Hz
Hartmann image acquisition	16 bit
Working wavelength	3-10 $\mu$ m
Calibrated waveband	2 $\mu$ m
Maximal exposure (at wavelength 720 nm)	0.04 nJ/cm <sup>2</sup>
Working temperature	from +10 to +45 °C
Weight	6.3 kg
Dimensions	600x450x175 mm

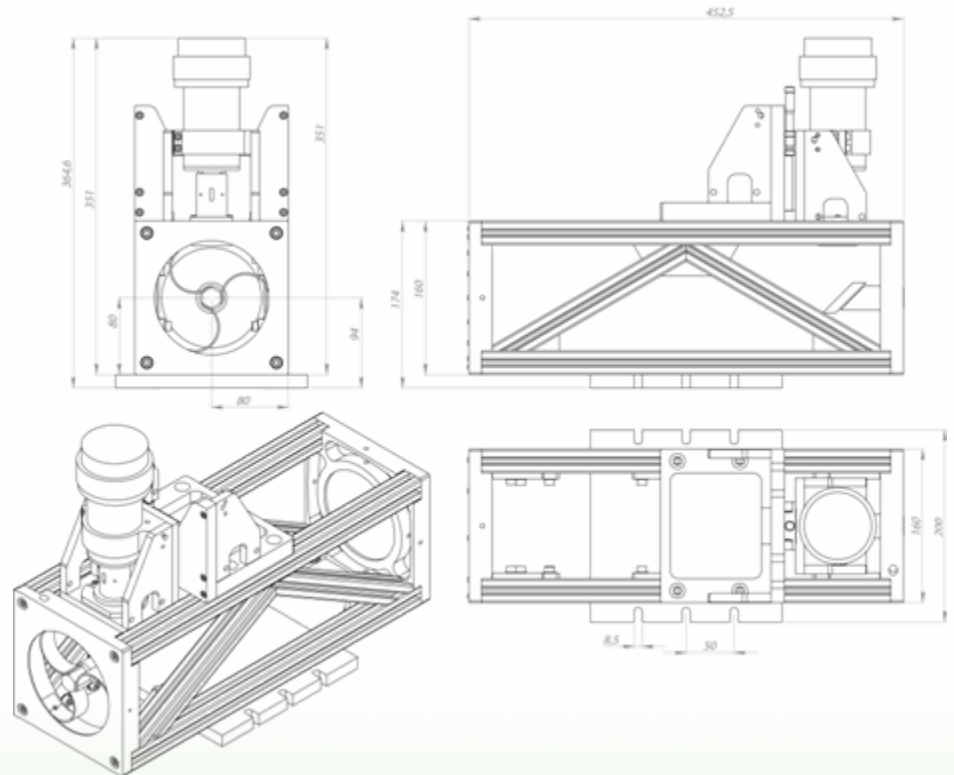
\* Better accuracy available upon request



WaveFront Sensor ShaH-10025-IR

Interface	Gigabit Ethernet (IEEE 802.3ab), GigE Vision compliant
Input power	12 W
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



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