11WFS-prime - Shack-Hartmann Wavefront Sensor  New!

- Low sensitive to mechanical noises and vibrations
- Wide range of wavelengths
- Possible to measure cw, pulse radiation including fs pulses
- Real-Time Measurements
- Possible to measure wavefront, beam intensity and estimate beam quality simultaneously
- Sensor can be easily built in adaptive optical system!

Measurement Results Display:

Tables:
PV, RMS.
Coefficients of wavefront aberrations in terms of Zernike Representations up to 36 and Seidel aberrations (Tilt, Defocus, Astigmatism, Coma, Spherical).
Laser Beam Characterization Parameters.

Graphical Windows:
Image of Hartmannogram.
Variety of graphical 3D, 2D distributions of phase and intensity of the beam (grayscale or color palette), synthesized fringes and gradient maps plots changing in accordance with data acquire.
Point Spread Function of the beam providing information about intensity distribution in the focus.
Different kinds of beam apertures (circular, elliptical, rectangle, polygon).
Justify option.
Report saving in several formats and printing with possibility of picture selection.

Software has user-friendly graphical interface with menu, hot buttons and help.

Applications:
Scientific research centers, educational and research laboratories.
Industrial concerns or business companies, producing laser systems and laser machine tools.
Manufactures which apply laser radiation as instrument for different kind of technologies, particularly, when the precision control of a beam is required.
Manufactures which develop devices for optical testing.
Medical therapy and diagnostics centers.

Example how the 11WFS is built in the adaptive optical system (AOS) is represented in this photo. AOS is intended to correct for wavefront aberrations. Incoming beam reflects from the first flat plane, after that from deformable mirror, and passes through the splitter. One part goes to the 11WFS and another part goes to output hole.

Accessories:

Optical Interface: Resizing system for beam collimating up to 100mm.
Neutral density optical filters (30%, 1%, 0.1%, Ø25mm with optical quality λ/10) in holder.
The source of flat reference wavefront (collimator, fiber-coupled laser for one wavelength, holder).
STANDA breadboards and mechanics.

Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
<tr>
<td>Wavelength range, mm</td>
<td>400...1100</td>
</tr>
<tr>
<td>Sensor’s aperture (format), mm</td>
<td>1/3”(1/2”) - 4.5x2.8 (6.4x4.8)</td>
</tr>
<tr>
<td>Camera resolution</td>
<td>744x480 pixels</td>
</tr>
<tr>
<td>Micro-lens array parameters, (Pitch,mm - Focal Length,mm)</td>
<td>0.15 - 6 (for base version)</td>
</tr>
<tr>
<td>Number of micro-lens</td>
<td>30x18 (42x32)</td>
</tr>
<tr>
<td>Frame rate</td>
<td>60 Hz</td>
</tr>
<tr>
<td>Wavefront accuracy</td>
<td>wavelength/10</td>
</tr>
</tbody>
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Ordering Information

| Model               | 11WFS-prime             |

http://www.standa.lt/products/catalog/light_test_measurement_instruments?item=306&prod=Shack_Hartmann_Wavefront_Sensor&print=1
<table>
<thead>
<tr>
<th>Wavefront dynamic range for tilts</th>
<th>wavelength*50</th>
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<tbody>
<tr>
<td>Dimensions</td>
<td>55 x 55 x 70 mm</td>
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