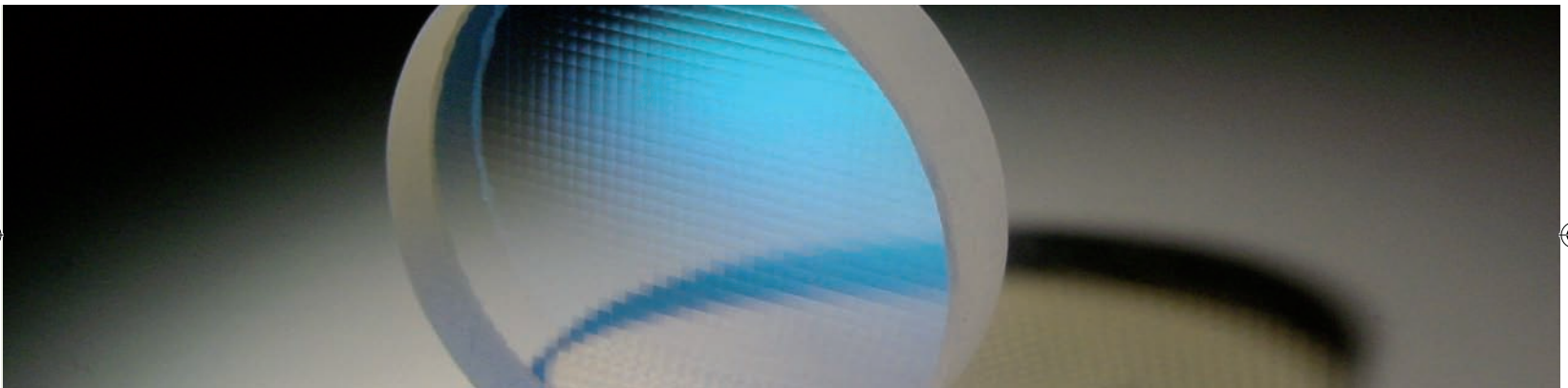




Microlens Arrays for Shack Hartmann Sensors



A Shack Hartmann sensor measures the intensity profile and the wavefront of coherent light in real time and with high accuracy. The sensor divides an incident wavefront into a number of beamlets by the subapertures of a microlens array.

Each microlens provides a separate focus on the sub grid of detectors on a CCD camera. The analysis of the resulting pattern is used to measure the optical phase of an incident wavefront.

Applications include measurements on astronomical instruments, adaptive optics, wavefront compensation, and the eye itself. Jenoptik provides unique microlens array solutions with high spatial resolution for Shack Hartmann sensors. These microlens arrays can be designed for wavefronts with large or small phase depths.

Features:

- High resolution
- Wide range of materials
- Wavelengths from deep UV to long-wave infrared
- Aspheric designs
- High fill factor

Applications:

- Astronomy
- Ophthalmology
- Laser beam analysis
- Diagnostics
- Adaptive optical systems
- Semiconductor manufacturing
- Biomedical

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Specifications

Focal length uniformity:	$\pm 3 \%$
Lens aperture:	15 to 1000 μm
F-number (F/#):	0.65 to about 20
Fill factor:	up to 100 %
Wafer thickness:	1 mm to 6 mm
Materials:	Fused Silica, Si, Ge, ZnS, ZnSe
AR-Coating:	Laser line or broadband
Product number:	029146

2D lens array



It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.



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