TRIOPTICS
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WaveMaster® Compact Universal

Wavefront and Surface Measurements with One System

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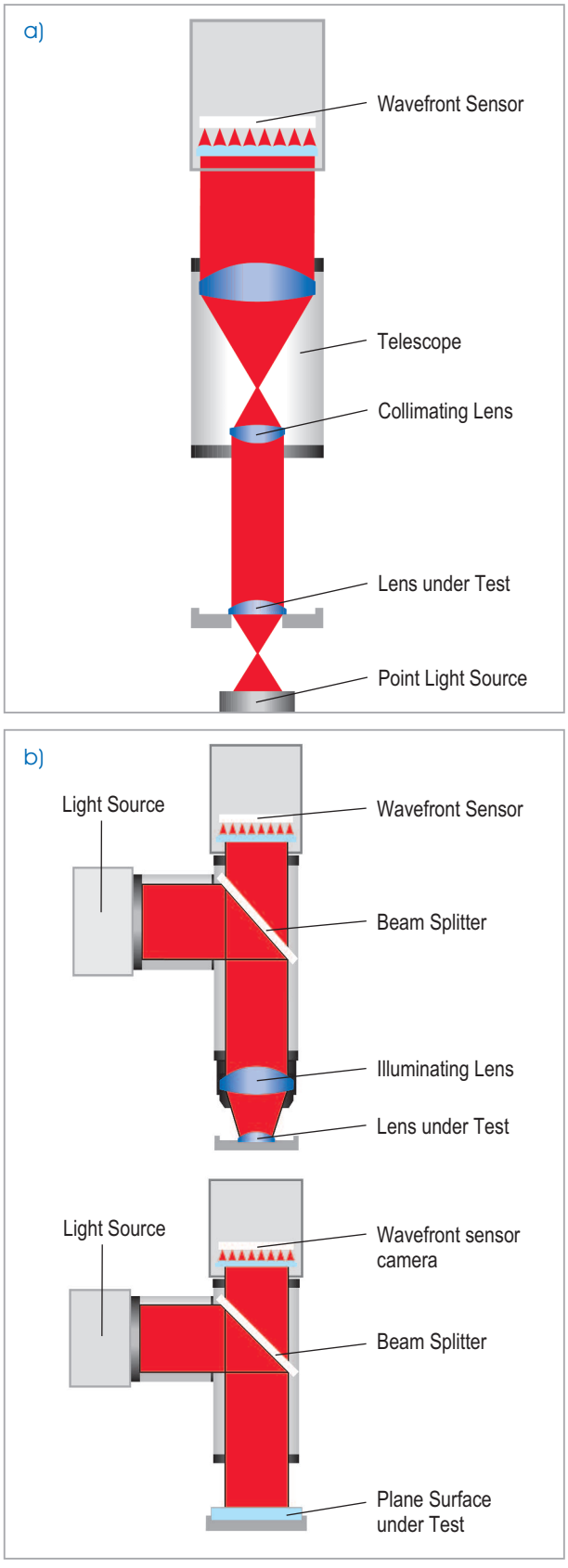
The WaveMaster® COMPACT Universal measures lenses in both transmission and reflection with TRIOPTICS' Shack-Hartmann sensor. Wavefront and surface topography of plano, spherical and aspherical optics are determined with one measurement system by making simple adjustments.

Key Features of WaveMaster® Compact Universal

- One system for the measurement of the wavefront in transmission and surface topography in reflection
- High measurement speed enables high sample throughput
- Fast and easy adaptable to different sample types
- High precision sample holder for submicron position adjustment
- Only minimum amount of sample alignment necessary when measuring series of samples
- Real time comparison with wavefront data from master lenses or design files
- High accuracy
- Automatic focusing
- Automatic positioning of the wavefront sensor and the telescope in the exit pupil
- Point light source with different numerical apertures available (up to 0.95)
- Vibration insensitive
- Comprehensive software for the wavefront and surface measurement with Shack-Hartmann Sensor



WaveMaster® Compact Universal works in
a) transmission and
b) reflection

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Applications

- Measurement of the wavefront (PV, RMS) and surface topography
- Determination of the Zernike coefficients
- Measurement of the Point Spread Function (PSF)
- Measurement of the Modulation Transfer Function (MTF)
- Measurement of the Strehl ratio
- Wedge angle
- Measuring the surface topography of aspherical lenses, spheres and plane surfaces
- Radius measurement

Technical Data of WaveMaster® Compact Universal

TRANSMISSION	
Measurement configuration:	• Wavefrontmeasurement of lenses • Transmission • Infinite set up
Sample diameter[1]	0.5 mm – 14 mm
Sample EFL[2]	-30 to +100 mm
Wavelength[3]	365 nm – 1064 nm
Sample holder	• Single seat • Manual positioning
Wavefront accuracy	< λ/20 (RMS)
Wavefront repeatability	< λ/200 (RMS)
Dynamic range	> 2000 λ
Measurement frequency	up to 12 Hz
Lateral resolution	138 x 138

REFLECTION	
Measurement configuration:	• Surface topography measurement of lenses • Measurement of lens mold and stamp surfaces • Measurement of radius of curvature of best fit sphere • Reflection
Sample size[4]	0.5 mm – 18 mm
Radius of curvature[5]	-50 to +30 mm
Wavelength	365 nm – 635 nm
Sample holder	• Single seat • Manual positioning
Profile accuracy	< 0.050 µm (RMS)
Profile repeatability	< 0.005 µm (RMS)
Dynamic range	> 200 µm
Maximum asphericity[6]	≤ 7°
Measurement frequency	up to 12 Hz
Lateral resolution	138 x 138

1 Depending on telescope
2 Depending on light source
3 According to customer's choice
4 Depending on radius of curvature and illumination lens
5 Depending on illumination lens and sample diameter
6 Local deviation from the best fit sphere

More information about the WaveMaster® Compact series at www.trioptics.com

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