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(54) **APPARATUS AND METHOD FOR EVALUATION OF OPTICAL ELEMENTS**

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(57) **ABSTRACT**

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An apparatus for measuring the optical performance characteristics and dimensions of an optical element comprising a low coherence interferometer and a Shack-Hartmann wavefront sensor comprising a light source, a plurality of lenslets, and a sensor array is disclosed. The low coherence interferometer is configured to direct a measurement beam along a central axis of the optical element, and to measure the thickness of the center of the optical element. The light source of the Shack-Hartmann wavefront sensor is configured to emit a waveform directed parallel to and surrounding the measurement beam of the interferometer, through the plurality of lenslets, and to the sensor array. A method for measuring the optical performance characteristics and dimensions of a lens using the apparatus is also disclosed.

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