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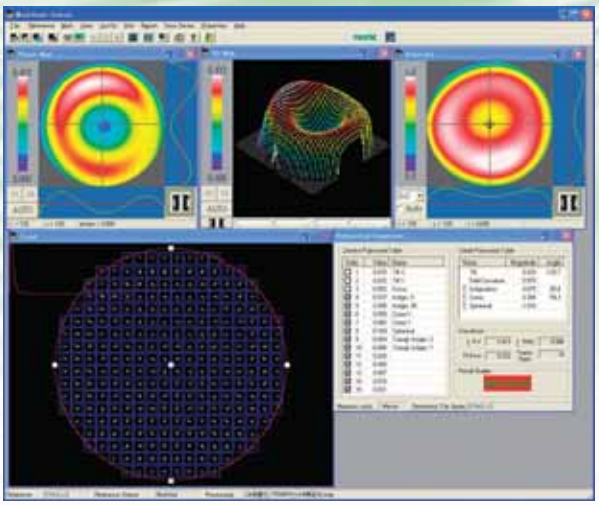
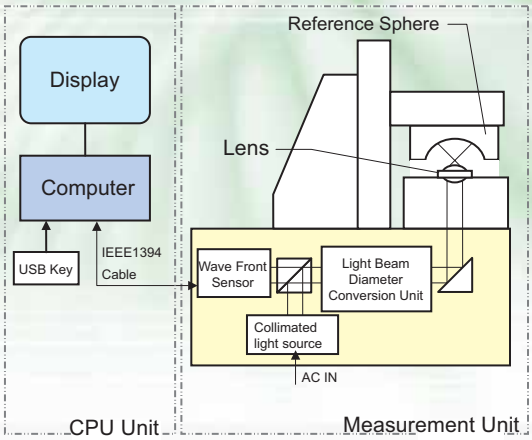
LC-1

Wavefront Measurement System for Optical Lens



■SYSTEM STRUCTURE



■ PRODUCT INTRODUCTION

This system evaluates the permeation characteristics of optical lens by applying Pulstec original wavefront sensor applying Shack-Hartmann method. It is capable of measuring not only small but also large aberration lens, which is hard to measure with conventional interferometer. Also, the complete inspection for production line can be achieved by real time measurement.

■ FEATURES

◎ Aspheric lens can be measured.
◎ Both concave and convex lenses can be measured by adopting the reference sphere.
◎ Measurement of large aberration range is achieved by the advantage of the wavefront sensor. (SA3:MAX 40λ P-V)
◎ Variety size of lens can be measured by the exchange of light beam diameter conversion unit.
◎ The wavelength is 635nm* for built-in laser source of measurement. (*Optional: 405nm, 650nm and 780nm)

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■SPECIFICATION

● Wavefront Measurement System for Optical Lens Standard Specifications

Measurement Wavelength	635nm (405、650、780nm *1)
Effective Measurement Diameter	φ2.0—4.6mm (φ1.5—φ15mm *2)
Wavefront Measurement Accuracy	< 1/100λ RMS (3σ)
Wavefront Measurement Repeatability	< 1/500λ RMS (3σ)
Data Update Speed	Max 10Hz
External Interface	IEEE1394 (6Pin)

*1： Optional
*2： Require the light beam diameter conversion unit.

● Value Measurement Items （Waves or μm）

- Zernike polynomial term 15/24/36 ····· :Coefficient, RMS
- Seidel Aberration Factor ····· :Coefficient, RMS
  - Astigmatism
  - Coma
  - Spherical
- General Wavefront Aberration ····· :Coefficient, RMS

● Display Items

- Interferogram ····· Shows fringe pattern that was made of wavefront aberration.
- 3D Phase Map ····· Shows phase by three-dimensional
- 2D Phase Map ····· Shows phase by two-dimensional
- Intensity ····· Shows intensity distribution of laser beam
- Point Spread Function (PSF) Shows intensity distribution of point image by light amplitude of wavefront aberration and light amplitude at input pupil.

● Other Specifications and Functions

- Data Save Function (CSV, BMP and JPEG files)
- Reference File Obtain (Correcting) Function
- Data Average Function

* The content of these specifications may change without notice.

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