WOOPTIX

SEBI® RT 1000

The new wavefront sensor

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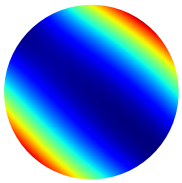
SEBI® RT1000

SEBI® RT1000, a wavefront sensor developed by Wooptix. It uses Wooptix's proprietary Wavefront Phase Imaging (WFPI) technique, acquires two out-of-focus intensity images and retrieves the wavefront phase map of the sample under test. These images are obtained using an electrically tunable lens (ETL).

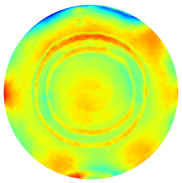
SEBI® RT1000 provides users with an exceptionally high wavefront phase spatial sampling (1000x1000 pixels), real-time processing capabilities (30 fps), and an absolute wavefront accuracy (<λ/30 RMS) for the most challenging measurement tasks.

The flexibility of SEBI® RT1000 allows users to characterize transparent or reflective samples through phase data acquisition within the nanometer range.

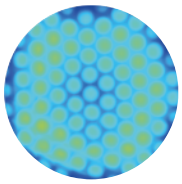
Applications



OPTICAL CHARACTERIZATION



MATERIAL INSPECTION



QUALITY CONTROL

Technical data

Phase sampling	1000 x 1000
Lateral resolution	12.5 µm
Repeatability	~λ/30 RMS
Aperture Dimension	15x15 mm
Wavefront Accuracy	<λ/30 RMS
Wavelength range	380-650 nm
Real time processing	30 fps
Interface	USB 3.0
OS	Windows

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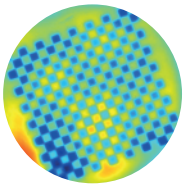
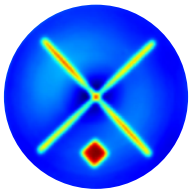
SEBI® Analyzer Suite

SEBI® RT1000 comes with its own software, SEBI® Analyzer Suite. This enables users to capture the phase map and intensity in real time at full resolution. It provides the optical path difference (OPD) of the sample under test, offering a detailed analysis. SEBI® Analyzer Suite allows users to process the acquired information accordingly (e.g., filtering Zernike coefficients).

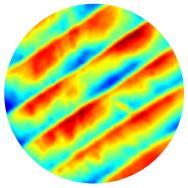
Measurements



SILICA PATTERNED WINDOW



CALIBRATION TARGET



FRESNEL LENS

Benefits

- High-resolution, real-time phase mapping.
- Easy installation.
- Versatile for a range of samples.

SEBI® RT1000 key features

SEBI® RT1000 wavefront sensor can be easily integrated into any setup or equipment (plug-and-play) to acquire and process high-resolution wavefront phase maps of the sample under test.

- **Wavefront sensor:** 1000 x 1000 pixel sensor operating in the visible range.
- **Documentation:** software, installation manuals and application notes to provide users with detailed information on how to use SEBI® RT1000.
- **SEBI® Analyzer Suite:** Software to acquire phase maps and process the data in real-time.

WOOPTIX

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Wooptix is a semiconductor wafer metrology innovator that provides the fastest, most accurate in-line measurements with the highest lateral resolution. Through its use of wavefront phase imaging (WFPI), a proprietary technique derived from research in adaptive optics, its systems measure the shape, nanotopography and roughness of the entire silicon wafer in a single shot. It is actively deploying solutions at various customer sites across Asia, Europe and North America.

Together with their resistance to vibrations and ease of adapting to the user's needs, they are valuable systems for measuring the wafer shape and nanotopography in a single shot.