

# SEBI<sup>®</sup>RT 1000

The new wavefront sensor

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## SEBI® RT1000

The SEBI® RT1000 introduces exceptionally high wavefront phase spatial sampling (1.000x1.000), real time processing (30 FPS), and absolute wavefront accuracy ( $<\lambda/30$  RMS) for the most demanding measurement tasks.

SEBI® RT1000 is a high-resolution wavefront sensor with real-time processing capabilities, offering high accuracy through the implementation of Wootpix's Wavefront Phase Imaging (WFPI) technique.



We acquire two out-of-focus intensity images in real time using an ETL, which are then used to apply the WFPI technique and retrieve the wavefront phase.

SEBI® RT1000 can measure a versatility of samples (transparent or reflective) that can benefit from phase data extraction to obtain information in the nanometer and micrometer range.

## Applications



OPTICAL  
CHARACTERIZATION



MATERIAL  
INSPECTION



REAL-TIME OBSERVATION  
OF DYNAMIC SAMPLES

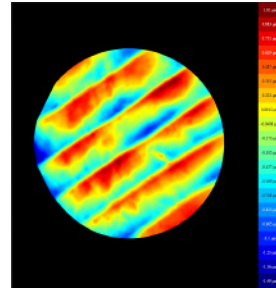
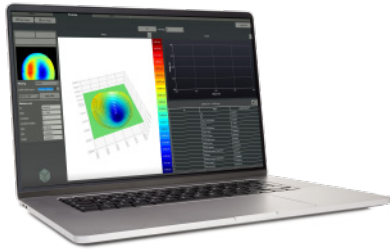
## Features

Phase sampling	1000 x 1000
Real-time processing	30 fps
Repeatability	$\sim\lambda/30$ RMS
Wavefront Accuracy	$<\lambda/30$ RMS
Wavelength range	450-650 nm
Acquisition rate (real time processing)	30 fps
Interface	USB 3.0
OS	Windows

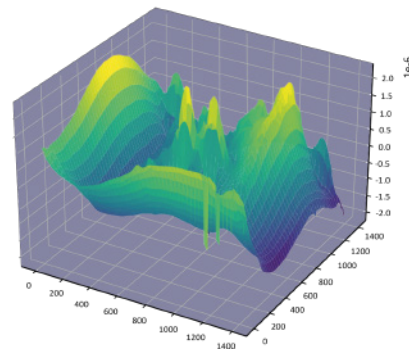
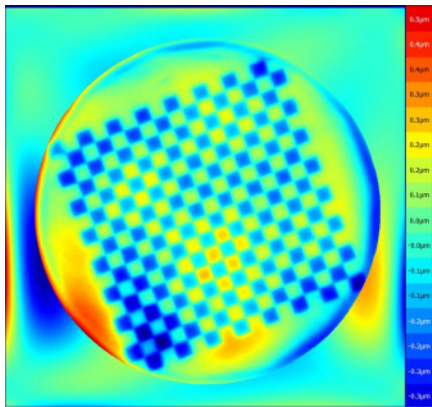


## SEBI® Analyzer Suite

We have developed our own software, SEBI® Analyzer Suite, which enables users to capture phase and intensity images in real time at full sensor resolution. This makes the SEBI® RT1000 a plug-and-play device, ready to be used.



## Measurements



## Benefits

- Speeds up quality control.
- Accelerates R&D processes.
- Reduces metrology costs.

## Launch Kit

The SEBI® RT1000 Launch Kit provides the necessary resources to experiment with imaging systems based on wavefront phase technology:

- **Phase sensor:** The kits include the phase sensor itself, which is the main component responsible for capturing phase information from light.
- **Documentation:** Detailed instructions, and user manuals, to configure and control the phase sensor.
- **SEBI® Analyzer Suite:** Analysis software to assist in the development process of the phase sensor system.



# 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.