

# Dual-Frequency Laser Interferometer ZLM 800



The ZLM 800 Dual-Frequency Laser Interferometer is the latest highlight in Jena's long tradition of designing and building laser interferometers. The tried-and-tested properties of the stabilized He-Ne gas laser as a dimensional standard are combined with electronic circuitry to provide a novel type of interferometric measuring system.

Programmable ASIC devices provide unparalleled capabilities for tailoring the system to specific custom requirements.

Applications of the ZLM 800 range from a stand-alone calibration system and multi-axis positioning set-ups to complete control systems for very fast kinetic processes. It is possible to completely evaluate the kinetic behaviour of machines and mechanisms and to analyse it in a user-specific way with the comfortable WINDOWS™ software.

An all-modular system with superb Zeiss optics, the ZLM 800 is the perfect solution to all measuring assignments accessible to laser interferometry:

- position
- distance
- speed
- acceleration
- angle
- vibration
- straightness
- squareness
- flatness
- alignment



## salient features at a glance

- test object speeds up to 12m/s
- resolution of 2,5 nm without interpolation errors(1,25 nm with plane-mirror interferometer)
- no limit to acceleration
- reliable signal detection even with very low light levels
- signal delay time < 200 ns
- frequency stability for the lifetime of the laser
- insensitivity to electromagnetic disturbance
- for use in high vacuum with superb Zeiss optics

