

Real-time High Resolution Quantitative Imaging by Three Wavelength Digital Holography

Applications:

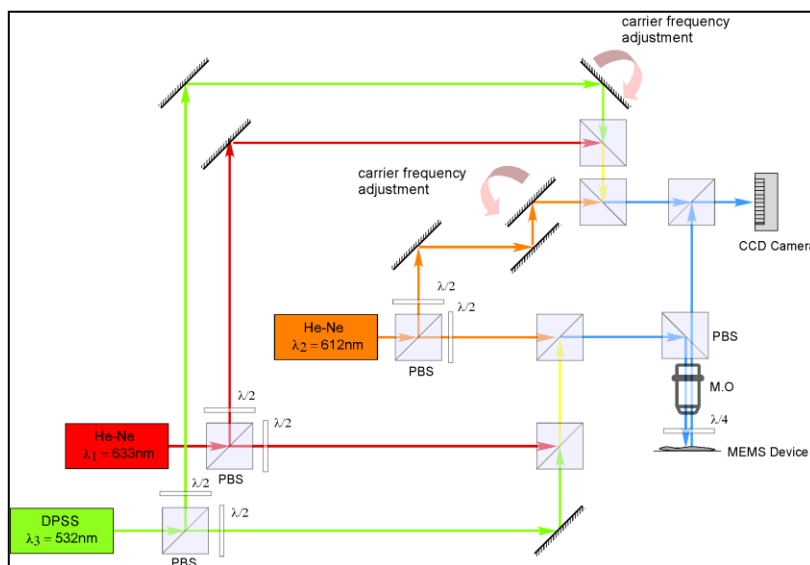
- Deformation measurements of MEMS or NEMS devices

Advantages:

- Real time acquisition
- High speed
- High resolution
- Long-range shape measurements of moving samples

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Apparatus for three-wavelength digital holography. $\lambda/2$: half-wave plate, PBS: polarizing beamsplitter, $\lambda/4$: quarter-wave plate, M.O: microscope objective.

Summary:

Technology Description

A device consisting of a system, method, and algorithm to measure the deflection of micro- or nano-electro-mechanical systems (MEMS or NEMS) sensors. Quantitatively determines the position of points on or within an object.

Technology Application

Can be used to measure the deformation of any MEMS or NEMS device by making direct, long-range shape measurements of dynamically moving samples with high resolution and speed. Useful in monitoring and influencing many different types of processes.

Stage of Development: Prototype

Patent Status: Patent application in progress

Licensing Status: Available for licensing in specific fields of use