White Light Interferometry Fiber Optic Sensor Technology

This article provides some optical fiber sensor network technologies based on the white light interference technology.

Anticipated trends include the development of quantum-enhanced interferometry, offering even higher precision, and advancements in fiber-optic sensors for remote and in-situ monitoring.

White light interferometry is a non-contact optical method for surface height measurement on 3D structures with surface profiles varying between tens of nanometers and a few centimeters.

Signal processing for low-finesse fiber-optic Fabry-Perot sensors based on white-light interferometry is investigated. The problem is demonstrated as analogous to the parameter estimation of a noisy, real, ...

We introduce an optical 3D sensor that can measure the shape of objects with rough surface. The proposed sensor is based on white-light interferometry but it does not require a ...

In this paper, a cost-effective and high-precision optical fiber sensing system based on VT-DBR laser for white light interferometry is proposed. A low-noise, l

White light, or low-coherence interferometry, is a technique which dates back to 1913 and the work of Benoit et al. . A detailed theoretical analysis of a simple interferometer, given by Born and Wolf , ...

The white light interferometer is designed so that the optical path length from the CCD element to the reference mirror and that from the CCD element to the sample surface are the same.

Opsens" founders are known to have pioneered the use of white-light interferometry for fiber optic sensing and to have brought this type of sensing technology to the industrial sensors marketplace.

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