# Fiber Bragg grating demodulation frequency


## Overview

A dispersion compensation fiber (DCF) changes the beat frequency within the FBG wavelength range. A novel approach to fibre Bragg grating spectra processing is proposed. The properties of the. A high speed quasi-distributed demodulation method based on the microwave photonics and the chromatic dispersion effect is designed and implemented for weak fiber Bragg gratings (FBGs).

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Simulation and experimental findings demonstrate that FMD can effectively eliminate the information of environmental noise and temperature, and greatly retain vibration information. In the ...

A novel approach to fibre Bragg grating spectra processing is proposed. The method is based on the use of nonlinear filtration and raising the ...

The proposed method significantly improves demodulation frequency and can potentially be applied in high-speed measurements without requiring additional devices or increased costs.

An FBG sensing system for measuring vibration was established. The demodulation frequencies are 14 and 560 Hz when using these two methods, which coincide with the simulation ...

Since the Bragg wavelength is a function of the fiber equivalent refractive index and the grating period, any physical parameter able to influence such quantities can be ascertained.

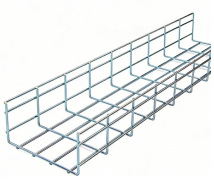
A demodulation algorithm is vital for a fiber Bragg grating (FBG) sensing system. In this paper, a novel demodulation algorithm based on the variable-step-size method and cross-correlation algorithm is ...


In this Letter, we propose a high speed quasi-distributed demodulation method based on the microwave photonics and the chromatic dispersion effect. The scheme uses broadband light source and ...

Our technique exploits the reflection characteristics of fiber Bragg gratings written in polarization-maintaining fibers to create a frequency ...

A novel approach to fibre Bragg grating spectra processing is proposed. The method is based on the use of nonlinear filtration and raising the spectrum value to the second power.

A dispersion compensation fiber (DCF) changes the beat frequency within the FBG wavelength range. With a crossing microwave sweep, all wavelengths of cascade FBGs can be quickly decoded by ...



Our technique exploits the reflection characteristics of fiber Bragg gratings written in polarization-maintaining fibers to create a frequency discriminator, which is able to convert PM/FM signals into ...

## Contact Us

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