Docket #: S10-346

Optimization of Slow-light Fiber Bragg Grating Sensors

In certain embodiments, an optical device and a method of use is provided. The optical device can include a fiber Bragg grating and a narrowband optical source. The narrowband optical source can be configured to generate light. A first portion of light can be transmitted along a first optical path extending along and through the length of the fiber Bragg grating at a group velocity. The light can have a wavelength at or in the vicinity of a wavelength at which one or more of the following quantitites is at a maximum value: (a) the product of the group index spectrum and a square root of the power transmission spectrum, (b) the slope of a product of the group index spectrum and one minus the power transmission spectrum, and (c) the slope of a product of the group index spectrum and the power transmission spectrum.

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Patents

- Published Application: 20120086934
- Published Application: WO2012033718
- Published Application: 20140340688
- Issued: 8,797,540 (USA)
- Issued: 9,366,808 (USA)

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