

Title (en)
TENSION CONTROL MECHANISM FOR BRAGG GRATING DEVICES

Title (de)
SCNAPPKONTROLLMECHANISMUS FÜR BRAGG GITTER VORRICHTUNG

Title (fr)
MECANISME DE COMMANDE DE TENSION POUR DISPOSITIFS A RESEAUX DE BRAGG

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Application
EP 00910443 A 20000310

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Abstract (en)
[origin: WO0054082A1] The present invention provides a mechanism for controlling the tension of a guided wave fiber Bragg grating (12) device. The tension imposed on a guided wave fiber Bragg grating (12) can be used to control its spectral characteristics as desired. For example, the center wavelength of a fiber Bragg grating (12) can be directly controlled by the tension imposed on the fiber, and in the case of a nonlinearly chirped grating, its effective group delay properties can also be controlled by fiber tension. These examples are directly related to applications in sensing, and in WDM filters and dispersion compensation devices. The tension control mechanism for controlling the spectral properties of a fiber Bragg grating (12) includes a support structure (18) to which the fiber Bragg grating (12) is attached at a first (20) and second (22) portion. The support structure (18) includes an adjustment mechanism (30) whereby adjustment of the support structure in one direction increases tension in the fiber Bragg grating (12) and adjustment of the support structure (18) in the other direction decreases tension in the fiber Bragg grating (12).

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