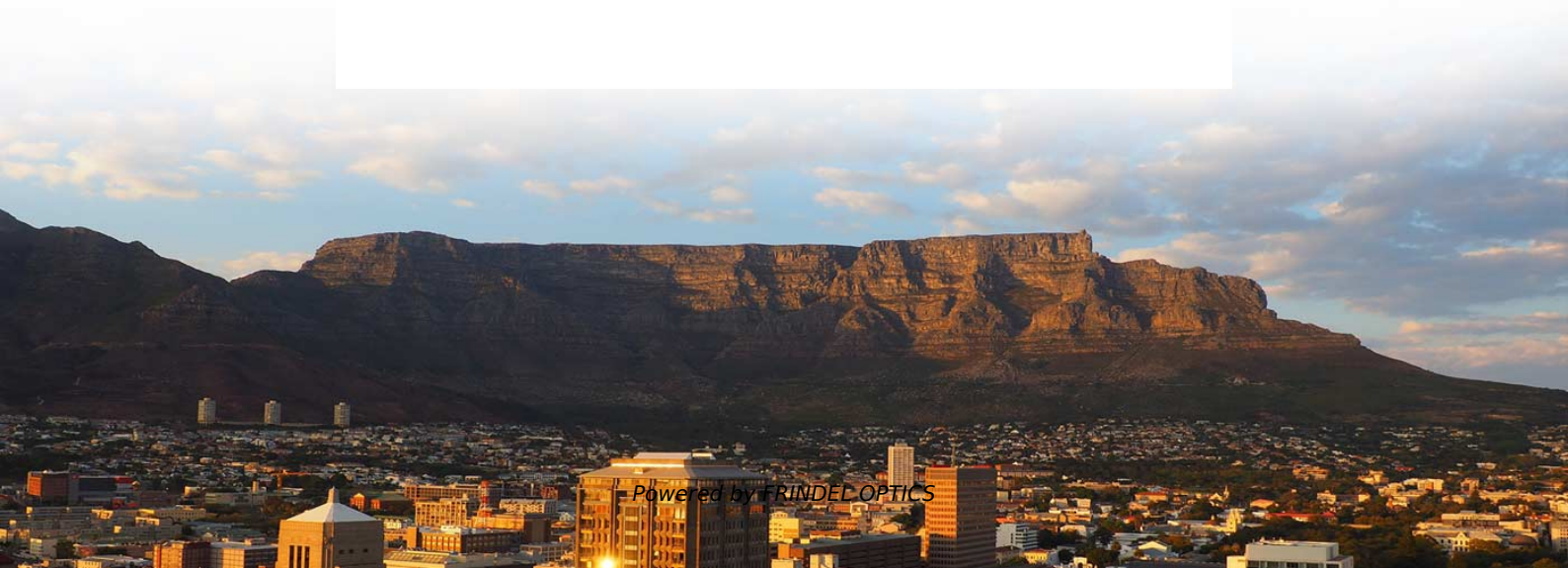
FRINDEL OPTICS

Comparison of Low Temperature Resistance of Planar Optical Waveguides



Comparison of Low Temperature Resistance of Planar Optical Wave

Waveguide (optics)

An optical waveguide is a physical structure that guides electromagnetic waves in the optical spectrum. Common types of optical waveguides include optical fiber

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1.3 um Wavelength AlGaInAs/InP Ridge-Waveguide Lasers Utilizing

Aiming at high-speed direct modulation over 10 Gbit/s, we have developed 1.3 um wavelength AlGaInAs/InP distributed feedback (DFB) lasers with a ridge-waveguide structure planarized by

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The Role of Planar Waveguides in Sensing Applications

The only non-vanishing components in the guided TM mode are E x, H y, and E z. Due to their high sensitivity, imperviousness to electromagnetic interference, short detection time, compactness, low

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Development of a Temperature-Controlled Optical

This paper aims to develop a temperature-controlled lossy mode resonance (TC-LMR) sensor on an optical planar waveguide with an active

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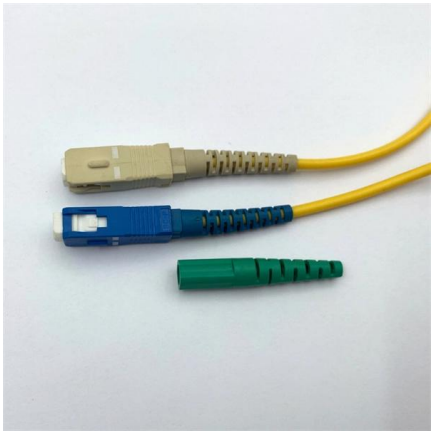

Low-loss low thermo-optic coefficient Ta2O5 on crystal quartz planar

This waveguide offers significant advantages over other waveguides in terms of its low thermo-optic coefficient and reduced thermorefractive-related frequency noise.

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Chapter 2. Planar optical waveguides

Abstract This chapter reviews planar optical waveguides, which are the key devices to construct integrated optical circuits and semiconductor lasers.

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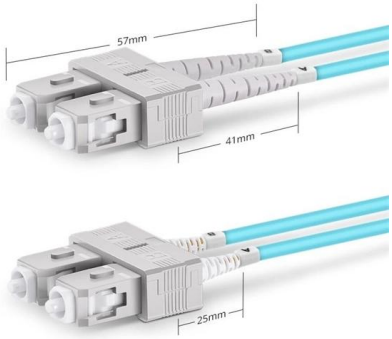

Duplex SC UPC

Temperature insensitive long period waveguide gratings in rib

In this paper, we propose achieving temperature insensitive characteristics by using a rib LPWG, in which the LPG couples light from the fundamental mode to the higher order modes (slab

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Optical Waveguides

(b) Optical waveguides Optical waveguides are planar dielectric structures with a core surrounded by cladding material. The ideal waveguide has low loss (Contact Us

(PDF) Planar Optical WaveGuides and Fibers

Planar optical waveguides such as films and strips or strip-derived structures are needed in these applications to form distributed components and to connect

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Review on Optical Waveguides

All optical information processing can overcome optoelectronic conversions that limit both the speed and bandwidth and are also power

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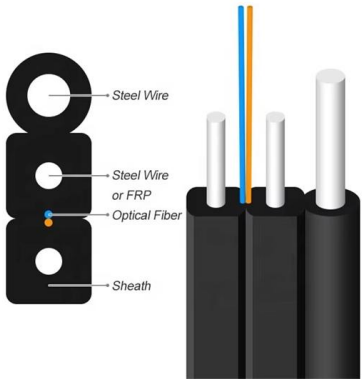

An exact analysis of the temperature control of optical waveguides

In this paper we have presented an exact analysis of the temperature dependence of optical waveguides with thermo-optic controlling regions, either as micro channels around a fiber

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An exact analysis of the temperature control of optical waveguides

In this paper we have presented an exact analysis of the temperature dependence of optical waveguides with thermo-optic controlling regions, either as micro channels around a fiber core, or as cladding

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Reducing thermal resistance of high-power semiconductor diode

Thermal resistance of diode lasers with different waveguide designs has been investigated. Coupled large optical cavity (CLOC) design allows reducing internal loss and

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Comparison of the Optical Planar Waveguide Sensors

A comparison of optical sensors' characteristics based on guided-mode resonance has been carried out. It was considered a prism structure with a

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Planar waveguide , Description, Example & Application

Planar waveguide Introduction to Planar Waveguides Planar waveguides are thin films or layers of dielectric materials that guide light waves along a certain path. They are commonly used in

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PLANAR OPTICAL WAVEGUIDES

Recent advances in opto-electronics and electro-optics have opened the infrared and visible part of the electromagnetic spectrum for communications and general data processing applications. Planar

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Comparison between various materials of planar optical

The resulting sensor heads showed relatively low cross-sensitivities to temperature. Nur Abdillah Siddiq et al. exploited SnO2 on a planar optical waveguide to

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Thermal-stress effects on the temperature sensitivity of

The temperature sensitivities of the effective refractive index of planar waveguides and channel waveguides are obtained theoretically. The thermal

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Planar optical waveguide temperature sensor based on etched bragg

This paper demonstrates the development of optical temperature sensor based on the etched silica-based planar waveguide Bragg grating. Topics include design and fabrication of the etched planar

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An exact analysis of the temperature

control of optical

Our results allow the design of temperature compensated devices using only a single parameter calculated at one temperature avoiding the need to

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Planar Waveguide

Planar Waveguides Waveguides formed on a flat substrate are called planar waveguides. These are typically made by stepwise deposition of films of dielectric materials (typically glass). The waveguide

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An exact analysis of the temperature control of optical waveguides

Abstract In this paper we present an exact analysis of the variation with temperature of the efec-tive index of an arbitrary optical waveguide. Our results allow the design of temperature compensated

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SiO2 Nanoparticles-Acrylate Formulations for Core and

A combination of acrylate formulations and SiO 2 nanoparticles is investigated with the aim to improve the optical properties of low-refractive index

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(PDF) Comparison of the Optical Planar Waveguide

Abstract and Figures A comparison of optical sensors' characteristics based on guided-mode resonance has been carried out.

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A Comparison of Approaches for Ultra-Low-Loss

We compare ultra-low-loss silica waveguides with PECVD SiO 2, borophosphosilicate glass (BPSG), and wafer-bonded thermal oxide upper

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Low-loss optical waveguides made with a high-loss material

Planar waveguides with low loss that are fully compatible with existing photonic circuit fabrication techniques are missing.

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Optimization of waveguide parameters for minimization of the

This study focuses on investigating how changes in temperature affect the sensitivities of an optical sensor that uses a SiO2:TiO2 planar waveguide, with particular emphasis on the

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