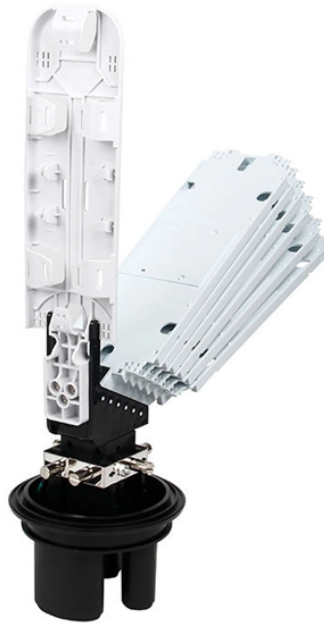


Custom Process for Low-Noise Planar Optical Waveguides in Distribution Network Automation

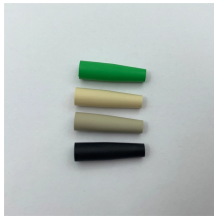


Overview

In this work, we present the first demonstration of ultra-low losses of 2.0 dB/m in silicon nitride waveguides and ring resonators with $Q = 11.18$ million, using an anneal-free process involving ICP-PECVD with deuterated silane as a precursor gas, with a maximum temperature of only. Planar waveguides, also called slab waveguides, are waveguides with a planar geometry, which guide light only in one dimension. They are often fabricated in the form of a thin transparent film with increased refractive index on some substrate, or possibly embedded between two substrate layers. Low Pressure Chemical Vapor deposited (LPCVD) Silicon Nitride core waveguides, with silicon dioxide upper and lower claddings, are one of the most. This article reports the recent progress in the optical waveguide technologies being developed to meet these needs. Introduction In addition to the recent spread of fiber-to-the-home services and the use of smartphones, the practical application of the Internet of Things (IoT) technology, in. An international research team has developed a method for fast fabrication of variable-cross-section waveguides for integrated

photonics—potentially useful for on-chip functionalities such as mode conversion, polarization control and beam rotation.

Custom Process for Low-Noise Planar Optical Waveguides in Distrib



We report about design, fabrication and properties of flexible polymer optical planar waveguides made of epoxy novolak resin as planar waveguides deposited on various foil substrates.



In this article, we report on the recent progress made in optical waveguide technologies that is helping to achieve extremely compact and highly integrated ...



This paper has proposed an automatic precise alignment coupling algorithm of planar optical waveguide devices based on polynomial fitting, and the experiment shows that for 1×8 ...



Our easy to use configurator allows you to assemble waveguide elements as building blocks, and adapt their parameters to generate your desired design.



Using the technique, the team was able to fashion, in glass, low-optical-loss, high-performance waveguides in a variety of shapes—and to do so in a matter of minutes of fabrication time.



Planar waveguides, also called slab waveguides, are waveguides with a planar geometry, which guide light only in one dimension. They are often fabricated in the form of a thin transparent film with ...



We describe the process and test and measurement results, and compare them with LPCVD nitride, and the potential for future use of this process technology.



This invention relates to integrated optical circuit fabrication, and more particularly to a novel process for fabrication of optical waveguides, whereby lift-off, rather than etching, is...



Using waveguide transmission loss as a metric, we study the impact of EBL writing parameters on waveguide performance and writing time. As expected, write strategies that reduce sidewall ...



Abstract: The fifteen papers in this special issue focus on ultra low loss planar waveguides and the applications.



The purpose of this review is to provide a unified framework for comparing the different techniques employed for manufacturing polymeric optical ...



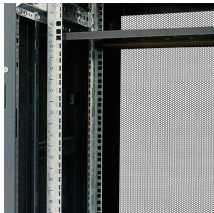
The paper reports on the fabrication and characterization of flexible optical multimode silicon-based organic elastomer planar and rectangular waveguides, where ...



To address this gap, we demonstrated a systematic study of the process for fabricating functional optical structures using a home-built thermal imprinting setup.



In this article, we report on the recent progress made in optical waveguide technologies that is helping to achieve extremely compact and highly integrated optical devices.



Planar lightwave circuits using silica-based optical waveguides are fabricated on silicon or silica substrate by a combination of flame hydrolysis deposition (FHD) and reactive ion etching (RIE).

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