Low-loss planar optical waveguides for IDC data centers

We describe the fabrication of graded index polymer waveguides, using the Mosquito and photo-addressing methods, and graded index glass waveguides, using ion diffusion on thin glass foils.

M. Webster, R. Pafchek, G. Sukumaran, and T. Koch, "Low-loss quasi-planar ridge waveguides formed on thin silicon-on-insulator," Appl. Phys. Lett. 87, 231108-231110 (2005).

In this test, the optical link contains a waveguide with a length of 7 mm to connect the two grating couplers and we calibrate its insertion loss from some reference samples in which the ...

Based on subwavelength gratings, here, we show that it is possible to create broadband, multimode waveguides with very low propagation losses despite using a strongly absorbing material.

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

We present two heterogeneous integration techniques that enable high-density electrical and optical I/O connections, utilizing adiabatic coupling between on-chip silicon nitride (SiN) ...

The special issue also includes contributed papers that highlight applications, i.e., low-loss silicon nitride waveguides for optical beamforming networks and continuously tunable optical true time delay using ...

One of the insights of the ATR FTIR investigations presented in section two is that a low SiH4/CH4ratio is preferable, because Si-H bonds absorbing in the optical C band are less pronounced in this case.

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Low loss, high contrast planar optical waveguides based on low-cost CMOS compatible LPCVD processing

Low-loss planar optical waveguides for IDC data centers

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