Comparison of Tracking Resistance and Lifespan Performance of Optical Directional Couplers

Photonic or optical directional couplers (PDCs) are passive devices that couple lightthrough waveguides or fibers. They are used to split, combine, or redirect optical signalswhile maintaining directionality, ...

In this review, a full review of different designs and types of planar directional couplers is presented, taking into account various design aspects such as compactness, multiband operation, and ...

A new methodology for realizing fabrication-tolerant planar directional couplers is proposed and experimentally demonstrated.

In this paper, two cross directional optical couplers on silicon-on-insulator are designed by a particle swarm optimized inverse-design method. Benefiting from the large optimization space, the ...

We conduct a systematic study involving experimental optical measurements, numerical simulations, and direct electron microscopy imaging to investigate this discrepancy in directional ...

Here we demonstrate the potential of silicon nitride (Si3N4) platform by realizing compact, wavelength independent low-loss directional couplers on it.

They have been used in various telecommunications instruments, such as splitters, wavelength-dividing multiplexers, optical switches, etc. The paper streamlines the designing process ...

Here, we experimentally demonstrate highly efficient transmission and reception of a terahertz slab-mode beam over a 3-dB bandwidth spanning a 6.4:1 range, confirming the broadband ...

The authors report, for the first time, a direct comparison between a directional coupler and a multimode interference-based device, in relation to their performance characteristics such as crosstalk, ...

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