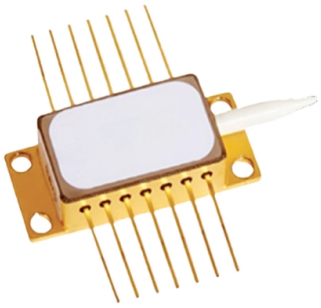
Wavelength Influence of Tapered Splitters



Overview

Tapered waveguides lead to improved power transfer from one waveguide to another, reduced coupler length, and wavelength insensitivity. It is thus a very useful element for PICs, especially in wideband application. In this paper, we present a compact and ultra-broadband 3 dB power splitter based on segmented adiabatic tapered rib waveguides, with a length of 23. The power. Splitters of these three types are then divided into one to four subsections of equal length, leading to 12 possible different configurations. In each of these subsections, the width is first linearly tapered either up or down and then tapered back to its starting value ensuring mirror symmetry. The coupling length of the device is 20. 3D-FDTD simulation results show that the splitter achieves an output transmission efficiency of nearly 50% over an ultra-broad wavelength range. The optical power splitter is a fundamental element in PICs; in order to increase the complexity and device density of InP-based PICs, splitters with small footprint and low excess loss must be developed.

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Article Content

Ultra-broadband and high extinction ratio polarization

At the 1550 nm wavelength, the realized PS exhibits the extinction ratio (ER) values of 35.7 dB and 37.35 dB as well as the insertion loss values of

An ultra-broadband, and low loss 3-dB optical power splitter with ...

In this work, we present and demonstrate a 3-dB taper-based power splitter by implementing Bezier curve optimization for the shape of the taper on a shallow etched silicon on

(PDF) Ultra-broadband and ultra-compact polarization beam splitter ...

In this work, we propose an ultra-broadband and ultra-compact polarization beam splitter (PBS) on a standard silicon-on-isolator platform.

Compact and Ultra-Broadband 3 dB Power Splitter

In this paper, we present a compact and ultra-broadband 3 dB power splitter based on segmented adiabatic tapered rib waveguides, with a length of

Wavelength-Dependent Polarization Beam Splitter Based on

The proposed structure can serve as a potential PBS with high PER and easy feasibility in various MCF-based applications owing to its capability of the wavelength-dependent and polarization

Sample manuscript showing specifications and style

We have systematically studied multimode interferometer (MMI) splitters made from multiple tapered sections. The goal is to create a library of robust and low-loss splitters covering all splitting ratios

Ultra-broadband and high extinction ratio polarization splitter based ...

The design and numerically investigation of a silicon polarization splitter (PS) is proposed using triple-tapered directional couplers (DCs).The proposed device consists of a triple-tapered DC, a triple-bent

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Due to the intrinsic wavelength dependence of the evanescent coupling length, the TM mode transmission is wavelength-sensitive, which is clearly inferred from Fig. 3b.

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