

We theoretically and experimentally demonstrate a broadband and fabrication-tolerant 1×2 integrated optical coupler with an arbitrary splitting ratio, based on a mode converter (MC).

Coupling ratio (in %) is the ratio of the optical power from each output port (ports 2 and 3) to the sum of the total power of both output ports as a function of wavelength.

Abstract: Variable power splitting ratio 2×2 MMI couplers using multi-mode waveguide holograms are analyzed. Theoretical analysis shows that variable splitting ratios can be obtained with surface relief ...

The change of behavior of the splitting ratio in different linear and nonlinear conditions and with different physical parameters has been studied rigorously. Our theoretical analysis goes superbly with that ...

We need to account for both theoretical and actual losses. Theoretical loss indicates the optimal loss under ideal conditions, while practical loss reflects real-world factors such as connector ...

We report here one of the significant performance parameters of a 2 × 2 symmetric directional coupler, the splitting ratio, in the nonlinear conditions considering the coupler fabricated ...

When designing a directional coupler, the length and gap must be chosen to produce the desired power splitting ratio at the output. Directional couplers are also sensitive to fabrication variations, so the ...

In this study, we introduce a method for measuring the splitting ratio of symmetrical and asymmetrical directional couplers, effectively mitigating the impact of alignment and fabrication errors.

Learn how to select the correct coupling ratio for splitter applications, optimize network performance, and minimize loss in high-density fiber optic systems.



Coupler Splitting Ratio Actual and Theoretical

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