

Peningkatan unjuk kerja pembagi daya optik berbasis struktur multimode interference (MMI) dengan menggunakan pemandu gelombang jenis taper

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=132926&lokasi=lokal>

Abstrak

In this paper, we propose a 1x2 and 1x4 optical power splitter from 1500 to 1600 nm based on multimode interference (MMI) structure with tapered input and output waveguides. The results obtained from modal propagation analysis (MPA) and beam propagation method (BPM) show better performance of the tapered structures than that of without taper in terms of the power imbalance and insertion loss by 44.94% and 32.50% for 1x2 and 21.18 and 73.03% for 1x4 respectively. These suggest that the proposed structures may be a better candidate for efficient wideband optical signal processing and communication.