The Effect Of Etch Depth To SOI Large Cross-Section Rib Waveguide

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Abstract

Silicon-on-insulator (SOI) with large cross-section rib waveguide (LCRW) has become one of the popular geometry used to design simple optical devices. Other than the advantages of the SOI material itself, the LCRW can avoid polarization issue and decrease the waveguide-fiber coupling loss. The dimension of the LCRW such as rib width, rib height, slab height and etch depth is identified to ensure it is compatible with its use. This research is to investigate the effect of the etch depth in SOI LCRW design. The objective of this research is to simulate and analyze the SOI LCRW with the changes of etch depth using beam propagation method. The waveguide has been designed in OptiBPM