Abstract

In this paper, we have proposed a new design of two dimensional (2D) photonic crystal (PhC) Tunable channel drop filter (CDF) using ring resonators. The increasing interest in photonic integrated circuits (PICs) and the increasing use of all-optical fiber networks as backbones for global communication systems have been based in large part on the extremely wide optical transmission bandwidth provided by dielectric materials. Based on the analysis we present novel photonic crystal channel drop filters. Simulations demonstrate that these filters exhibit ideal transfer characteristics. Dropping efficiency at the resonance of single ring are 92% and quality factor is obtained 1046. The footprint of the proposed structure is about 125.
Design of Tunable Channel Drop Filter using Hexagonal Photonic Crystal Ring Resonators by FDTD Method

6?m2; therefore this structure can be used in the future photonic integrated circuits.

References


Index Terms
Keywords
FDTD Method  Pcorr  Variable  Rods