Abstract

This paper presents the design of digital optical switch (DOS) which exhibit low crosstalk, low insertion loss and low power consumption. The geometry of Y-junction was simulated and optimized using finite difference beam propagation method (FD- BPM). The optimized Y-junction shape has been determined to be hybrid shape which consists of cosine s-bend branch connected to linear branch. Compare to conventional linear Y-junction, the effective index modulation was reduced to 26.5% to achieve -34 dB of crosstalk value.