

# **Abstract**

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## **Asymmetric Modified Optical Cross Add Multiplexer to Cancel Crosstalk**

A proposed new design of optical cross add multiplexer (OXADM) is presented. It reduces the number of required circulators and total ion losses compared with other circulator and FBG based designs. This enhances the isolation and crosstalk levels. In the new design, the homodyne crosstalk is eliminated in the signal. Also, the homodyne crosstalk in the output signal is reduced by more than 30 dB.