

# **Abstract**

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## **On the Performance of Few-Mode EDFAs with Bidirectional Pumping**

In this paper, we examine a few-mode EDFA using unequal pump power with pump wavelengths 980 nm and 1480 nm for forward and backward pumping, respectively. A gain greater than 20 dB is achieved with low noise figure (NF) over the C-band. Moreover, we study the bidirectional pumping FM-EDFA in case of equal pumping wavelength at 980 nm and different pump powers.