

High-Performance GaAs/AlGaAs Optical Phase Modulators for Microwave Photonic Integrated Circuits

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A high-performance high-speed optical phase modulator for photonic integrated circuit (PIC) use is described. Integration of these optical phase modulators into a real system (COMPASS) is also discussed. The optical phase modulators are based on depletion-edge translation and have experimentally provided optical phase shifts in excess of $60^\circ/\text{V}\cdot\text{mm}$ with approximately 4 dB/cm loss while simultaneously demonstrating bandwidths in excess of 10 GHz.

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