

# Abstract

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## **Self-Phase Modulation Based Wavelength Conversion Using Different Types of Fibers**

We demonstrate Self-Phase Modulation (SPM) based wavelength conversion at 1.55  $\mu\text{m}$  using three different commercial types of optical fibers. A numerical simulation is used to predict the performance of each type of fibers and to address the potential of each fiber type in wavelength conversion applications utilizing self-phase modulation. It is shown that a wavelength conversion over  $\pm 5$  nm can be achieved with around 30 mW output peak signal power leading to a remarkable better performance.