

Self-seeded four-wave mixing cascades utilizing fiber Bragg grating

ABSTRACT

Utilizing fiber Bragg grating (FBG), we demonstrate self-seeded four-wave mixing (FWM) cascades. Larger FWM cascades are produced at higher erbium-doped fiber amplifier (EDFA) output power using a simple scheme. Six channels are generated at the EDFA output power of 252.35 mW. The separation gap of selective dual wavelength is designed at 1.6 nm, following to the wavelength separation of the FBGs used.

Keyword: Fiber lasers; Four-wave mixing cascades; Optics nonlinearities