

Wideband double-pass discrete Raman amplifier with pump reflector

ABSTRACT

In this paper a study on the wideband double-pass Raman fibre amplifier with mirror as the pump reflector is reported. The pump lights at 1435 nm and 1455 nm were launched in a co-directional manner with respect to the input signal. The double-pass direction of the signal was achieved through a fibre loop mirror constructed using an optical circulator. It was shown that multiple signal amplification was achieved without any disturbance of stimulated Brillouin scattering.

Keyword: Discrete Raman amplifier; Double-pass; Fibre Bragg grating; Wideband; Pump reflector; Fibre loop mirror; Brillouin scattering