295
Accession number:20114614507214
Title:Simple novel all-optical wavelength converter
Authors:Chen, Zhixin (1)
Author affiliation:(1) Central University of Finance of Economics, School of Information, Beijing 100081, China
Corresponding author:Chen, Z.(czx.bupt@gmail.com)
Source title:Optical Engineering
Abbreviated source title:Opt Eng
Volume:48
Issue:2
Issue date:2009
Publication year:2009
Article number:025003
Language:English
ISSN:00913286
E-ISSN:15602303
CODEN:OPEGAR
Document type:Journal article (JA)
Publisher:SPIE, P.O. Box 10, Bellingham, WA 98227-0010, United States
Abstract:Based on Sagnac interferometric structure, a simple novel ultrafast scheme for an all-optical wavelength converter is proposed. The operations of this scheme with a 80-Gbits/s return to zero (RZ) pseudorandom bit sequence (PRBS) are simulated correctly with an output extinction ratio of more than 17.2dB. Through numerical analysis, by comparison of the performance at 40- and 80-Gbits/s operation, the operating characteristics of the scheme are illustrated. Furthermore, the carrier recovery time of the semiconductor amplifier (SOA) is no longer a crucial parameter to restrict the operation speed of this scheme.
Number of references:9