



Optica Applicata 2004(Vol.34), No.1, pp. 17-24

Cost-effective method for generating >20 GHz pulse trains using actively mode locking fiber ring laser

Sun-Jong Kim, Chang-Soo Park

SEARCH

[Advanced search](#)

Keywords

high-speed, millimeter wave, mode locking fiber laser, Mach-Zehnder interferometer, optical communications

Abstract

This study proposes a simple method to generate high-speed pulse of more than 20 GHz. Its cost performance ratio in an actively rational harmonic mode locking scheme is maximized when the multiplication factor $p = 4$ and 6 . The operation is based on a relatively simple structure using the optical Mach-Zehnder modulator (MZM) biased at the minimum transmission peak and optical filtering via a Mach-Zehnder interferometer (MZI) comb filter. Stable and amplitude-equalized pulse trains with a repetition rate of ~ 20.345 GHz are successfully demonstrated.



223.3 kB

[Back to list](#)

© Copyright 2007 T.Przerwa-Tetmajer All Rights Reserved 2007

stat4u



About Optica Applicata
Current issue
Browse archives
Search
Editorial Board
Instructions for Authors
Ordering
Contact us