

293

Accession number:20114714538266

Title:Wavelength switchable single-longitudinal-mode fiber laser with two  $\Pi$  phase-shifted chirped fiber Bragg grating as a narrow linewidth filter

Authors:Sun, Junqiang (1); Chen, Jinlin (2); Huang, Yanxia (1); Li, Hong (1); Jiang, Chao (1)

Author affiliation:(1) Hubei Normal University, College of Physics and Electronic Science, Huangshi 435002, China; (2) Huazhong University of Science and Technology, College of Optoelectronic Science and Technology, Wuhan, 430074, China

Corresponding author:Sun, J.(sunjq\_phy@yahoo.com.cn)

Source title:Optical Engineering

Abbreviated source title:Opt Eng

Volume:49

Issue:9

Issue date:September 2010

Publication year:2010

Article number:091007

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:A wavelength switchable single-longitudinal-mode erbiumdoped fiber laser is experimentally demonstrated, in which a novel two  $\Pi$  phase-shifted chirped fiber Bragg grating serves as the dual-channel narrow-linewidth filter, and a switch module consisting of three bandpass filters and a variable optical attenuator is used to control the laser behaviors of single- and dual-wavelength lasing. A stable dual-wavelength single-longitudinal-mode oscillation with 8-nm wavelength spacing is also realized and verified. The results provide a potential possibility to generate continuous terahertz waves optically.

Number of references:13