96.
Accession number:20113014170843
Title:Compact single mode tunable laser using a digital micromirror device
Authors:Havermeyer, Frank (1); Ho, Lawrence (1); Moser, Christophe (2)
Author affiliation:(1) Ondax Inc., 850 E. Duarte Road, Monrovia, CA 91016, United States; (2) Laboratory of Applied Photonics Devices, School of Engineering, Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland
Corresponding author:Moser, C.(christophe.moser@epfl.ch)
Source title:Optics Express
Abbreviated source title:Opt. Express
Volume:19
Issue:15
Issue date:July 18, 2011
Publication year:2011
Pages:14642-14652
Language:English
E-ISSN:10944087
Document type:Journal article (JA)
Publisher:Optical Society of America, 2010 Massachusetts Avenue NW, Washington, DC 20036-1023, United States
Abstract:The wavelength tuning properties of a tunable external cavity laser based on multiplexed volume holographic gratings and a commercial micromirror device are reported. The 3x3x3 cm3 laser exhibits single mode operation in single or multi colors between 776 nm and 783 nm with less than 7.5 MHz linewidth, 37 mW output power, 50 μs rise/fall time constant and a maximum switching rate of 0.66 KHz per wavelength. The unique discrete-wavelength-switching features of this laser are also well suited as a source for continuous wave Terahertz generation and three-dimensional metrology. © 2011 Optical Society of America.