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Title:Intracavity configuration for tuning and obtaining simultaneous dual-wavelength operation from CW Nd:YAG laser
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Abstract:In this letter, a thin slab of glass is used as Fabry-Perot etalon inside a cavity of a continuous wave (CW) Nd:YAG laser to change the behavior of its output longitudinal modes. The slab etalon is used as tuning element when it turns around the laser cavity axis. Two simultaneous longitudinal modes with a relatively wide tuning range from 5.83 MHz to 0.02 THz are obtained when the Nd:YAG laser is operated at moderate output power of about 120 mW. The mode structure of this configuration is modeled and simulated. Computer-generated diagrams are also presented schematically and compared with the experimental results. © 2011 Chinese Optics Letters.