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25 kHz narrow spectral bandwidth of a wavelength tunable diode laser with a short waveguidebased external cavity

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(Submitted on 2 Apr 2012)

We report on the spectral properties of a diode laser with a tunable external cavity in integrated optics. Even though the external cavity is short compared to other small-bandwidth external cavity lasers, the spectral bandwidth of this tunable laser is as small as 25 kHz (FWHM), at a side-mode suppression ratio (SMSR) of 50 dB. Our laser is also able to access preset wavelengths in as little as 200 us and able to tune over the full telecom C-band (1530 nm - 1565 nm).

Comments: 8 pages, 7 figures

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