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Title:Grating-based wavelength control of single-and two-color vertical-external-cavity-surface-emitting lasers
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Abstract:Wide wavelength tunability of single-and two-color operating vertical-external-cavity-surface-emitting lasers (VECSELs) is demonstrated. Employing an external feedback based on a diffractive grating outside the cavity of a narrow-line single-color VECSEL allows for a continuous tuning of the emission wavelength over 10 nm. Employing a dual-feedback-configuration for tunable two-color emission, a tunability of the difference frequency between the two lasing wavelengths from 300 gigahertz to up to 3.5 terahertz is demonstrated. © 2011 Optical Society of America.
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