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Broad bandwidth SOA-based multiwavelength laser incorporating a bidirectional Lyot filter (Article)

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Abstract

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We demonstrate a broad bandwidth multiwavelength laser based on a bidirectional Lyot filter and a semiconductor optical amplifier with a mechanism of intensity-dependent loss as the flatness agent. A wide bandwidth of a multiwavelength spectrum of 32.9 nm within a 5 dB uniformity is obtained under optimized polarization parameters. For this case, the number of generated lasing lines is 329 with a fixed wavelength separation of 0.1 nm. The power stability of this multiwavelength laser is less than 1.35 dB within 200 min time frame. This shows that the bidirectional Lyot filter provides an alternative option for multiwavelength generation in laser systems. © 2018 Chinese Optics Letters.

SciVal Topic Prominence

Topic: Fiber lasers | Erbium | wavelength spacing

Prominence percentile: 93.123

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