Green high-power tunable external-cavity GaN diode laser at 515 nm - DTU Orbit (28/02/2019)

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A 480 mW green tunable diode laser system is demonstrated for the first time to our knowledge. The laser system is based on a GaN broad-area diode laser and Littrow external-cavity feedback. The green laser system is operated in two modes by switching the polarization direction of the laser beam incident on the grating. When the laser beam is p-polarized, an output power of 50 mW with a tunable range of 9.2 nm is achieved. When the laser beam is s-polarized, an output power of 480 mW with a tunable range of 2.1 nm is obtained. This constitutes the highest output power from a tunable green diode laser system.

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