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Abstract Submission for 2013 CS ManTech

"The latest progress of Nitride-based visible LEDs and Laser diodes"

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Recently, nonpolar and semipolar LEDs have been developed using GaN substrates. These LEDs have superior characteristics in the view of the wavelength stability, efficiency droop and others in comparison with those of conventional C-plain LEDs. Violet, blue and green nonpolar/semipolar edge-emitting laser diodes (LDs) were developed with an advantage of the higher gain than that of c-plain LDs. Also, first nonpolar vertical cavity surface emitting laser (VCSEL) diodes which polarization was locked along a-axis were developed by our group recently. The latest progress of nonpolar/semipolar LEDs and LDs are described.