

عنوان مقاله:

Performance Comparison of blue InGaN Laser Diodes with Different Waveguide Structures

محل انتشار:

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خلاصه مقاله:

In this study, the waveguide structure effects on the 400 nm InGaN/InGaN semiconductor laser performance is compared. The conventional and new structures are theoretically investigated by using simulation software PICS3D which self-consistently combines 3D simulation of carrier transport, self-heating and optical wave-guiding. Excellent agreement between simulation results and experimental findings is obtained by careful adjustment of material parameter in physical model. Simulation results show that removing electron blocking layer in conventional structure causes to improving electrical and optical laser performance, but laser temperature distribution does not change significantly.

کلمات کلیدی:

InGaN Laser diode, Waveguide design, Numerical analysis, PICS3D

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