

Future trends in design of the high efficiency semiconductor lasers

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Low power consumption is in demand for future electronic and optoelectronic devices, especially for military applications. Minimization of carrier and optical losses is a decisive factor in increasing the wall-plug efficiency of semiconductor lasers. In this poster we will consider a set of possible future trends in optimization of laser design. Broadened waveguide approach and methods of minimization of lateral and heterobarrier carrier leakage together with corresponding characterization techniques will be considered in application to single and multimode semiconductor lasers operating within the 0.98–2.7 μm spectral range.