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Thermoreflectance and micro-Raman measurements of the temperature distributions in broad contact laser diodes

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Abstract

In this paper we describe a number of optical techniques suitable for estimation of the semiconductor surface temperature. High spatially resolved thermoreflectance will be shown as a powerful tool to measure temperature distribution at the laser diode front facet. For determination of the absolute value of the front facet temperature we use micro-Raman spectroscopy. Both techniques will be presented as a complementary ways to determine surface temperature distribution on the working laser diode.

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