



ELECTRONIC MATERIALS TECHNOLOGY NEWS

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Record Claimed by Al-Free Laser

Researchers at Northwestern University, led by Manijeh Razeghi, and Semiconductor Laser International Corp.'s (SLI 15 Link Dr., Binghamton, NY 13904; Tel: 607/722-3800, Fax: 607/722-3900) president and CEO Geoffrey T. Burnham, are claiming the longest lifetime ever achieved for any high power (≥ 1 W) laser diodes (LDs) operated at high temperature ($\sim 60^\circ\text{C}$) with uncoated facets. The reliability testing on the aluminum- (Al-) free indium gallium arsenide phosphide/gallium arsenide devices was reported in the November issue of *Applied Physics Letters*.

No degradation was observed over 30,000 hours of lifetime in any of the randomly-selected LDs. The broad-area lasers featured 100 micron-wide contact stripes and cavity lengths of 700 microns and emitted at a wavelength of 808 nm. The researchers chose not to coat the device's facets in order to restrict testing to the device structures themselves. SLI holds exclusive licenses to the Northwestern University-developed Al-free technology.