

# **INP-BASED VCSELS FOR 1.55 $\mu\text{m}$ WAVELENGTH RANGE**

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We present a new approach for InP-based long-wavelength VCSELS based on buried tunnel junctions. Excellent cw laser performance has been demonstrated for 1.45-1.85 $\mu\text{m}$  wavelength, such as sub-mA threshold currents, 0.9 V threshold voltage (at  $\lambda=1.55\mu\text{m}$ ), 30-100  $\Omega$  series resistance, differential efficiencies >25%, 90°C cw operation, stable polarization and single-mode operation with SSR of the order 50 dB.