

New Technology Announcement

Nonlinear Control Strategies Inc and their University of Arizona subcontractor demonstrate the first high-power, multi-Watt 589nm VECSEL

Nonlinear Control Strategies Inc (NLCSTR) and their strategic partner NAsP GMBH, Marburg, Germany have designed and grown VECSEL wafers using NAsP's unique low temperature growth technology to target structures emitting at a fundamental wavelength of 1178nm. NLCSTR is the prime contractor on a Phase II STTR project, funded by the U.S Air Force Office for Scientific Research (AFOSR). In joint work with its University of Arizona subcontractor on the STTR project, a 5 Watt 589nm VECSEL was demonstrated via intra-cavity second harmonic generation (SHG) in the VECSEL cavity. The pictures below show the laboratory demonstration on the left and the input diode bar pump versus output fundamental IR (at 1178nm) and doubled (589nm) yellow output.

This technology breakthrough opens up the full 585nm-600nm yellow orange visible spectrum for applications in medicine and provides output power ranges relevant to the development of novel compact low-cost Guidestar sources. This work has appeared in IEEE Photonics Technology Letters (2008). Digital Object Identifier: 10.1109/LPT.2008.2003413

