



A Passion for Precision.

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Press Release

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New: BlueMode Diode Laser

TOPTICA sets new record for blue diode lasers:
50 mW power @ 405 nm with highest coherence length

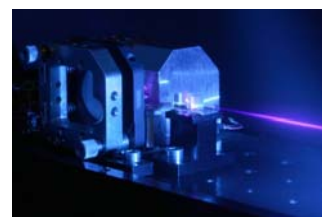
At LASER 2009, TOPTICA Photonics unveils a new technology setting new standards for blue-violet diode lasers – the BlueMode laser. The BlueMode laser unites high power, high coherence and superior long-term mode stability –all in a compact and rugged design. BlueMode is based on a novel, proprietary technology developed by TOPTICA.

To-date, interferometry and holography in the blue-violet spectral range were bound to deal with bulky, power consuming gas ion lasers. Intense blue laser diodes have been available but their coherence length was restricted to a few millimetres at most. Grating-stabilized lasers, on the other hand, provided a spectrally narrow emission line, but their single-frequency output power was limited to below 15 mW.

BlueMode delivers 50 mW @ 405 nm, with a spectral line width of less than 5 MHz (coherence length > 25 m guaranteed). A power stability better than 0.6% in 10 hours has been demonstrated. The combination of excellent long-term coherence stability and outstanding single mode behavior, renders the laser a perfect fit for applications such as interferometry, holography, high resolution Raman spectroscopy or photonic down-conversion.

Optionally, the laser light can be coupled to single-mode fibers using TOPTICA's OEM proven FiberDock unit. Due to the patented flexure mount unit, easy adjustment, best long-term stability and highest coupling efficiencies are achieved.

There is a clear roadmap for expanding the technology to further



TOPTICA's Blue Mode Technology unites high power and highest coherence in a compact diode laser unit.

Author:

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wavelengths, such as 375 nm, 445 nm and 488 nm.

Please visit us at LASER World of PHOTONICS, hall B1, booth 115.

TOPTICA Photonics AG develops, manufactures, services and distributes technology-leading diode and fiber lasers and laser systems for scientific and industrial applications. Sales and service is offered worldwide through TOPTICA Germany and its subsidiary TOPTICA USA, as well as all through 13 distributors. A key point of the company philosophy is the close cooperation between development and research to meet our customers' demanding requirements for sophisticated customized system solutions and their subsequent commercialization.

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