



Development of Compact (0.5 cc) Yellow-Green and Orange Laser Modules with High-speed Modulation Capability

Prototype demonstration at SPIE Photonics West

Kanagawa and Tokyo Japan, January 23, 2012 ---

QD Laser, Inc. and the Institute for Nano Quantum Information Electronics, the University of Tokyo today announced successful development of new compact laser modules of 561-nm (Yellow-green) and 594-nm (Orange) wavelength with high-speed modulation capability. Prototypes of the yellow-green and orange laser modules will be exhibited at SPIE Photonics West (Booth#5307), held from January 24, 2012, in San Francisco. Based on the same module platform developed for high-power, compact green laser modules, QD Laser and the University of Tokyo have successfully extended the wavelength band to yellow-green and orange visible color region. These compact modules are promising for a wide range of applications, especially in the field of life science and biomedical use such as fluorescence microscopes, spectral analysis, or gas sensing.

This development is supported in part by the New Energy and Industrial Technology Development Organization (NEDO) and Project for Developing Innovation Systems conducted by Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan.

QD Laser and the University of Tokyo have finely tuned the oscillation wavelength of near infrared single-mode lasers based on semiconductor DFB (Distributed Feedback) laser technology as well as operating wavelength of PPLN (Periodically poled LiNbO₃) crystal for wavelength conversion to 561 nm and 594 nm, putting them together in recently developed compact modules of about 0.5 cc. The size of the module is 5.6 x 3.8 x 22 mm³. These modules successfully operate in yellow-green and orange wavelengths. Diode pumped solid state (DPSS) lasers are usually used in the wavelength of green, yellow, to orange. The new compact module, based on semiconductor laser technology, enables drastic compactness, high stability in power and wavelength, and high-speed modulation, providing common platform in many application areas.

QD Laser is now developing the new laser modules to contribute to the market-leading customers in addition to green laser modules, QLD0593 series.



Figure.1 Projected laser light of 561, and 594 nm from the compact laser modules

Press and Customer Contacts

QD Laser, Inc.

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About QD Laser, Inc.

Founded in April 2006 with capital funded by Fujitsu Limited & Mitsui Ventures (Currently "Mitsui & Co. Global Investment Ltd."), with headquarters located in Kanagawa, Japan. QD Laser, Inc. is a technology leader in the field of semiconductor optical devices including quantum dot lasers, based on more than ten years of research collaboration between Fujitsu Laboratories Ltd. and the University of Tokyo in Japan.

For more information: www.qdlaser.com

About Institute for Nano Quantum Information Electronics, the University of Tokyo

Established in October 2006 as a cross-department organization by the University of Tokyo. The purposes are realizing technical innovation in future advanced electronics based on nanoscience, nanotechnologies and information science as well as promoting young researchers who will take a leadership role in future. Working in close collaboration with several leading companies, domestic universities, and overseas universities, NanoQuine aims to become an international CEO in the field of nanoquantum information electronics. For more information about NanoQuine: <http://www.nanoquine.iis.u-tokyo.ac.jp/index-e.html>

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