First Orange OPSLs for Life Sciences

A new series of Sapphire™ lasers from Coherent, Inc. (Santa Clara, CA) (Nasdaq: COHR) offer orange output, which is particularly well matched for exciting a number of fluorescent dyes used in bioimaging. Specifically, the new Sapphire models deliver 20 mW, 50 mW, 75 mW or 100 mW at 588 nm. And, because they utilize Coherent's unique optically pumped semiconductor laser (OPSL) technology, these new Sapphire 588 LP lasers offer superior performance and reliability characteristics, making them ideal for demanding OEM and standalone applications. The Sapphire 588 LP offers a diffraction-limited, TEM00 beam with M2<1.1, low beam divergence (<1.3 mrad), high pointing stability <5 µrad/°C, excellent power stability (<2% over 2 hours), and low noise (0.25% rms from 20 Hz to 2 MHz).

With the compact laser head measuring just 125 mm x 70 mm x 34 mm, Sapphire 588 LP lasers provide identical form, fit, and function compatibility (optical, mechanical, electrical, interfacing) with all other Sapphire LP models, independent of wavelength and power class. This simplifies integration, including wavelength addition and substitution, for OEMs and end users alike. And as with other Sapphire LP lasers, the new 588 nm models are equipped with USB, RS-232 and analog interface ports for ease of installation and operation.

Sapphire 588 LP lasers are intended for life sciences applications such as flow cytometry, confocal microscopy, and drug discovery. In particular, their 588 nm output is an optimum wavelength for exciting a broad range of established red fluorescence fluorophores (e.g., Texas Red, Alexa Fluor 594) as well as new fluorophores such as the mfruit dyes (e.g., mCherry, mPlum).

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[1] http://www.coherent.com