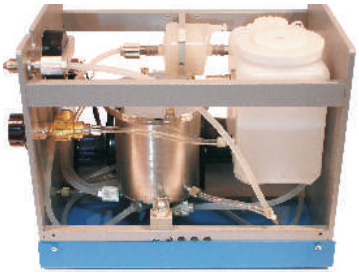
Combined CW Ti:Sapphire/Dye laser with intracavity frequency doubling, model “TIS/DYE-FD-08”

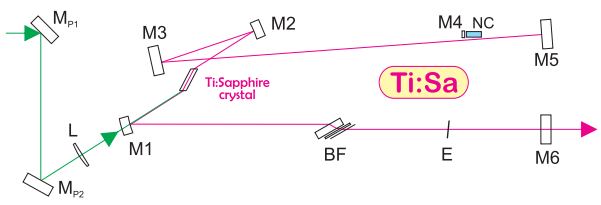
Laser unit



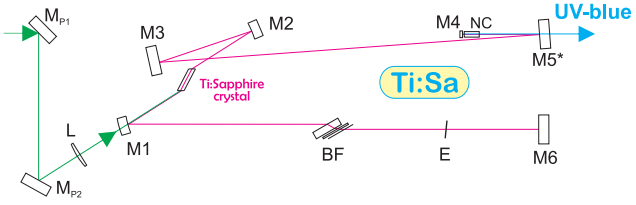
Dye circulation unit

CW narrow-band combined Ti:Sapphire/Dye laser with intra-cavity frequency doubling, model TIS/DYE-FD-08, presents the optimal cost-efficient solution for a source of radiation tuneable within a wide range of wavelengths important for spectroscopy of semiconductor materials and other tasks. The output radiation wavelength range of the laser is 570-950 nm (570-700nm/Dye and 700-950nm/Ti:Sa) for the fundamental harmonics and 285-425 nm for the second-harmonics, the radiation line width being 0.05-0.01 nm depending on the installed selective elements.

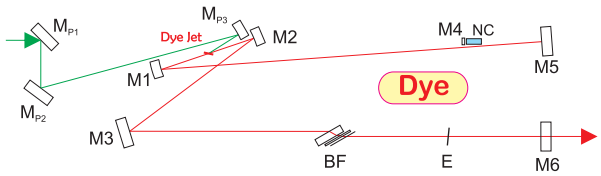
In the combined model TIS/DYE-FD-08 the advantages of two tuneable lasers are joined — the Ti:Sapphire and Dye, with the possibility of intra-cavity second-harmonic generation in each of them. Output power at the fundamental wavelength reaches 1.5 W with a 10-W pump, the output power of the second harmonics exceeds 50 mW when pumped with 5 W and is more than 100 mW when pumped with 10 W.

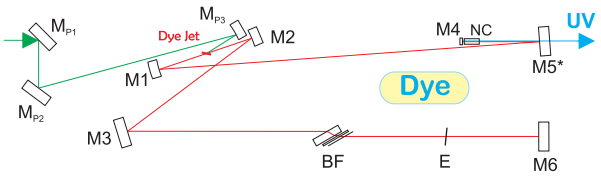


Generation of fundamental radiation



Second harmonic generation





Optical layouts of the CW narrowband combined Ti:Sapphire/Dye laser, model TIS/DYE-FD-08: M_P - pump mirrors, L - lens, M1, M2, M5 - spherical mirrors , M3, M4, M5, M6 - flat mirrors, BF - 3-plate birefringent filter, NC – nonlinear crystal, E – thin etalon .*

Tekhnoscan JSC
Sirenevaia 37, k. 141, Novosibirsk, 630058, Russia
Tel./fax: +7-(383)-339-72-24, email: service@tekhnoscan.com
www.tekhnoscan.com