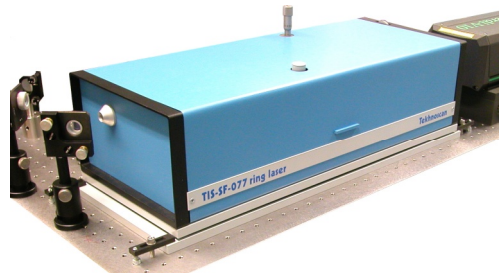


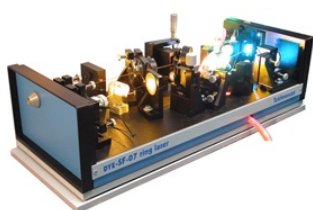
TUNABLE LASERS and Accessories

TEKHNOSCAN Company presents new modern solutions for reliable and highly efficient tuneable lasers used in spectroscopic studies, atom cooling, nano-technology, and other fundamental and applied research projects.

Single-frequency CW Ti:Sapphire lasers with ring cavities (TIS-SF-07, TIS-SF-077, TIS-SF-777) deliver powerful output in the wavelength range of 695-1050 nm. Flagship model TIS-SF-777 of frequency-stabilised Ti:Sapphire laser features less than 5-kHz rms absolute linewidth (< 50 kHz rms in the model TIS-SF-077), frequency drift not exceeding 40 MHz/hour, and smooth frequency scanning range wider than 5 GHz. The scanning range may be expanded to 35 GHz in the model TIS-SF-07 that has the output linewidth of 5 MHz. All models of single-frequency ring Ti:Sapphire lasers deliver output power exceeding 1.5 W (around 800 nm) with a 10-W pump.



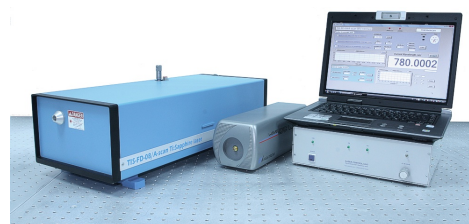
atom cooling, trapping, and quantum manipulation, high resolution spectroscopy



Single-frequency CW Dye lasers with ring cavities provide the output linewidth within 100 kHz rms (DYE-SF-077) and < 10 MHz (DYE-SF-07) in the 570-700-nm wavelength range. One of important features of single-frequency CW ring lasers offered by Tekhnoscan is the original and proprietary design of their horizontally oriented cavities that allow having both Ti:Sapphire and Dye lasers in a single device with minimal changes in mechanical and optical elements when switching between Ti:Sapphire and Dye configurations.

atom trap trace analysis, atomic clocks, formation of cold molecules, nanostructure fabrication

Unique fully computer-controlled powerful CW ultra-wide-tunable narrow-line laser system, model "T&D-scan", comes as a perfect embodiment of modern ideas and technology innovation in the field of nanotechnology-oriented smart tunable laser spectrometers. Novel advanced design of the fundamental laser component implements efficient intra-cavity frequency doubling as well as provides a state-of-the-art combined tunable narrow-line (linewidth < 1 GHz) laser covering a super-broad spectral region between 275 and 1100 nm.



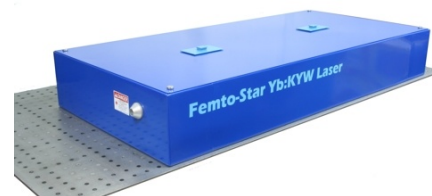
wide-range spectral studies of quantum semiconductor objects and nanostructured materials



Resonant frequency doubler, model FD-SF-07, represents a new step in extending the wavelength range of single-frequency CW lasers into the blue and UV spectral ranges. Frequency doubling is performed with exceptional efficiency: with a 1-W power of input radiation the output power exceeds 250 mW within 350-475-nm range (for input at 700-950 nm), is more than 200 mW within 275-350-nm (input: 550-700 nm), and more than 150 mW in the range of 244-275 nm (input: 488-550 nm). FD-SF-07 also stands out from the competition because of its Smart Auto-ReLock function that considerably extends the range of smooth second-harmonic frequency scanning.

UV spectroscopy, fiber Bragg gratings writing, photolithography, material processing

Femtosecond lasers offered by Tekhnoscan include the traditional Ti:Sapphire laser (model FEMoS) and the new Yb:KYW laser, model Femto-Star, which is shipped with a compact pumping module. Direct pumping of the Yb:KYW laser with laser diodes noticeably simplifies the ultrafast system on the basis of Yb:KYW laser, as well as makes it considerably cheaper in comparison with other femtosecond lasers, which use expensive DPSS and Ar lasers as pump sources.



Model Femto-Star provides different generation modes with pulse durations 250 fs, 1ps, and 6 ps in the 1040-1055 nm range, delivering up to 400 mW of average power at 90-110 MHz pulse repetition rate. Femto-Star laser may also be complimented with an "FS/PS-Auto" auto-correlator by Tekhnoscan.

ultrafast spectroscopy, nano-optics, THz applications, seeding an amplifier system

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