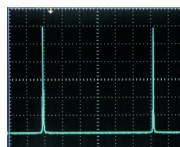
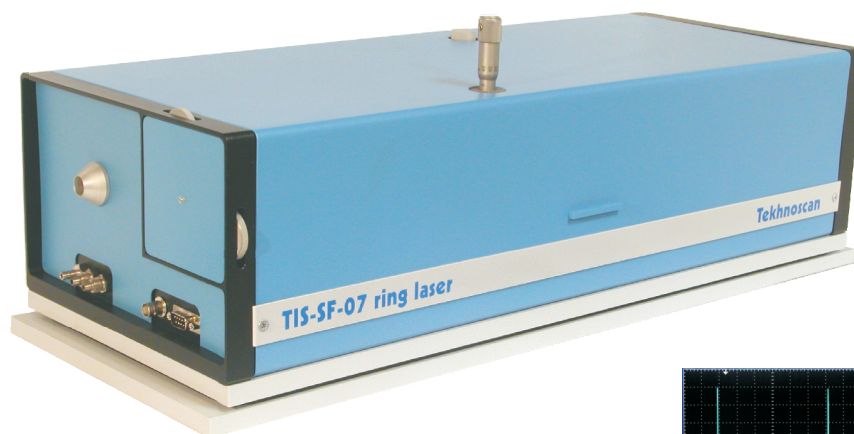
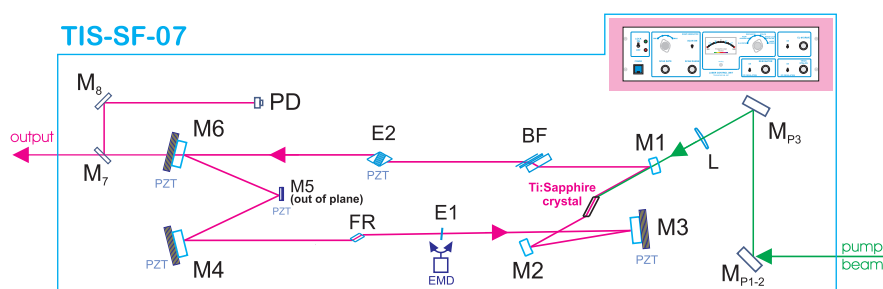


CW single-frequency ring Ti:Sapphire laser model “TIS-SF-07”



CW single-frequency ring Ti:Sapphire laser, model “TIS-SF-07”, ensures high output power (> 1.6 W pumped with 10 W @ 532/515 nm) in a narrow radiation line (line width < 5 MHz rms). Highly stable laser resonator with volumetric solid base featuring three invar rods provides long-term stability of laser parameters. When the laser is daily operated in clean room conditions, only a slight adjustment of the pump beam position may be necessary, because the latter may change during the warm-up time of the pumping source. Ultra-accurate controls of the pump beam position implemented in “TIS-SF-07” model are accessible from the input flange of the laser, the user can operate them without lifting the case cover.



The optical scheme of the laser is configured in such a way that it provides for both ring and linear cavity operation with only a minimal re-alignment of the mirrors. Preliminary alignment of the selective and Faraday elements in the linear cavity makes the subsequent adjustments in the ring resonator much easier. Thoroughly-thought alignment system of “TIS-SF-07” significantly speeds up and simplifies laser alignment to max out parameters after a change of the mirror set to switch to a different spectral range. Available wavelength tuning range of Ti:Sapphire laser is covered in “TIS-SF-07” model by several optical sets for the following ranges: 695-780 nm, 750-850 nm and 850-950 nm. Easy access to any of the cavity elements provides additional comfort when switching to a different spectral range with a change of the mirror set.

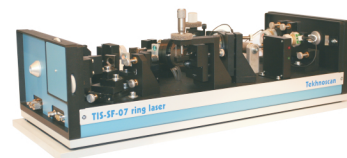
⊙ Highly stable resonator cavity with volumetric solid base built on three invar rods and additional vibration sink base of the laser head



⊙ Quick tuning of the laser to a given wavelength and simple mirror change procedure when switching spectral ranges

⊙ Precision adjustment of optical elements and exceptionally accurate alignment of the pump beam position

⊙ Possibility of direct pumping (without any additional mirrors and/or spacers) by popular DPSS lasers, the centre of the input aperture of TIS-SF-07 laser matching that of a DPSS laser



⊙ Possibility of laser operation in both ring and linear resonator configurations

⊙ Simplified laser alignment in the ring configuration because of preliminary optimisation of the elements in the linear cavity



⊙ Ergonomical and reliable electronic control unit featuring a built-in generator for smooth scanning of the laser frequency

⊙ Possibility of subsequent efficient output frequency stabilisation with the aid of a special small-mirror/fast-PZT assembly included into the cavity design

TIS-SF-07

CW single-frequency ring Ti:Sapphire laser

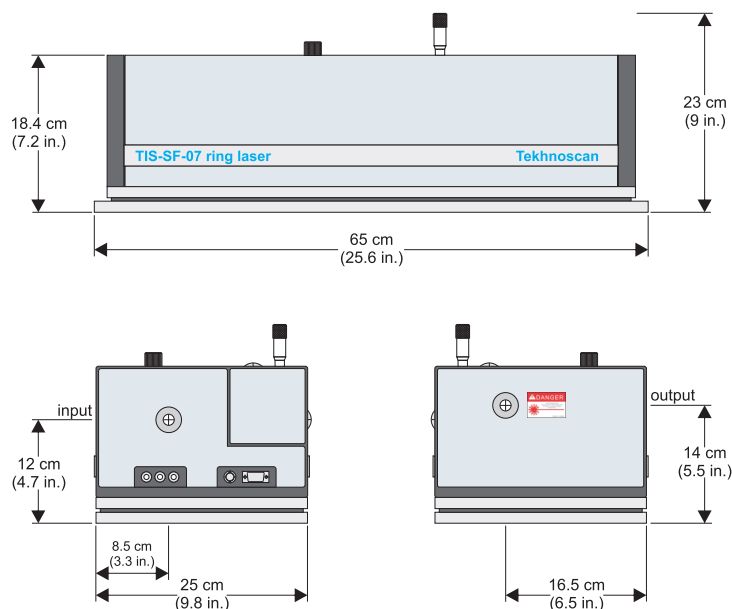
Specifications:

Wavelength range	750-850 nm 695-770, 850-950 nm
Output	> 1.5 W at 10 W pump
Linewidth	< 5 MHz rms
Smooth scanning	> 5 GHz ¹
Spatial mode	TEM ₀₀
Polarization	horizontal

1. up to 25 GHz (optionally)

Options:

- 25 GHz smooth scanning
- 350-475 nm wavelength range with Resonant Frequency Doubler "FD-SF-07"
- Upgradable to Frequency-stabilised Laser with linewidth of < 100 kHz (TIS-SF-077) or < 15 kHz (TIS-SF-777)
- + Dye laser (linewidth < 10MHz or < 100 kHz) in the same Laser head



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