# Trestles Options Now available with Yb:YAG disk laser pumps from ELS











Oscillator Kits

Femtosecond Oscillators



Complete Femtosecond Systems Now with cost effective pump sources from









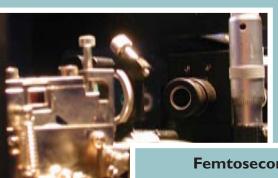


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# **Oscillator Kits**

Femtosecond Ti: sapphire laser kits represent an excellent compromise between time and cost. Containing all necessary optical and mechanical elements together with a thorough instruction, it enables the user to achieve stable femtosecond lasing after a short time of training. Basic configurations correspond to Trestles-100KIT, Trestles-50KIT or Trestles-20KIT femtosecond Ti: sapphire lasers, but different configurations are possible with the kit resulting in several advantages compared to fixed setups. E.g. repetition rates may be varied from 70 to 140 MHz.





Modular design and customizability allows our Trestles Ti:sapphire lasers coupled with ELS pumps to be the base for complete integrated ultrafast optical systems. Used as an affordable seed source for both multipass and regenerative Ti:sapphire amplifiers the combination offers customers a wide range of available pulse energies. Complete systems including amplifiers, OPOs, OPAs, multiphoton imaging systems, and fluorescence measurement systems.





# **Femtosecond Oscillators**

Our femtosecond Ti:sapphire oscillators offer the user an alternative to more costly femtosecond lasers. Due our "open architecture" we can reduce costs while keeping the flexibilty and performance research institutes require. Trestles series femtosecond oscillators come pre-aligned and enclosed in a rugged protective housing.



Pulse Length Wavelength Range Repetition Rate Pump Power Output Power Pulse Energy

	_
Trestles-I00	Trestles
<100 fs	<50 fs
710-950 nm	740-950 r
93 MHz	83 MHz
3-10 W	3-7 W
150 mW - 1.0 W	150 - 500
I0 nl	6 nl

\* with external prism compressor

-50

nm

mW

Trestles -20 <20 fs\*

740-950 nm

150 - 250 mW

83 MHz 3-5 W

3 nJ

### **System options:**

Self modelocking electronics package Computer controlled (USB) wavelength tuning slit Extended wavelength tuning range Onsite installation and training available The MonoDisk-515 from ELS Laser provides high output power and exceptional beam quality making it an ideal pumping solution for the Trestles series femtosecond Ti:sapphire lasers from Del Mar Photonics. The MonoDisk-515 is a cost effective laser that can emit more than 15 W cw output power at 515 nm. The emitted beam has a perfect Gaussian intensity profile with a M² value below 1.1. The MonoDisk laser is a diode-pumped Yb:YAG disk laser. It is ideally suited to replace Argon ion lasers for pumping Ti:sapphire systems.

The Trestles, MonoDisk-515 combination provides a complete and cost effective solution for the generation of 20-100 femtosecond laser pulses in the near infrared region from 720-950 nm.

# Technical Data MonoDisk-515

Wavelength 515 nm
Output power 5 W, 10 W, 15 W
Mode structure TEM00  $M^2 < 1.1$ Polarization Linear > 100:1, vertical
Beam diameter 1.5 mm  $\pm$  10 %
Beam divergence 0.5 mrad
Power instability  $< \pm$  1 % (over 2 hours,

### **ELS Contact Information**

after warm-up)

### **Global Headquaters**

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## **North American Opterations**

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d wavelength tuning range

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