

## **ALTAIR Series**

## High repetition rate, high power femtosecond fiber laser



ALTAIR produces high average power with ultrashort femtosecond pulses (down to <100 fs) at high repetition rate (40 MHz or 80 MHz) in an ultra compact and robust format. ALTAIR is a fiber laser providing high stability and excellent beam quality.

Integrating state of the art high-power fiber amplifiers and pulse management, **ALTAIR** offers remarkable pulse quality at high average power with no maintenance required.

ALTAIR is perfectly well suited for microscopy applications using special fluorophores requiring wavelengths high imaging and resolutions

#### **KEY FEATURES**

- Average power from hundreds of mW to 20W
- From <100 fs to 200 fs pulse duration.
- High repetition rate
- Excellent beam quality
- Low timing jitter
- Compact package, Rugged design, Plug-andplay
- Maintenance free

# SCIENCE & BIOPHOTONIC

#### **APPLICATIONS**

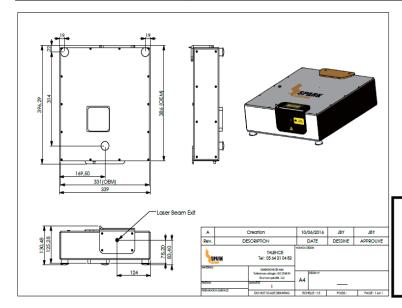
- Multiphoton microscopy
- Two-photon microscopy
- **Optogenetics**
- Neuroscience
- Terahertz generation

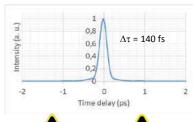




### **Technical Specifications\***

Model	ALTAIR Series			
Average Power	< 2W	5W	10W	20W
Wavelength	From 1030 to 1064 nm (according to needs)			
Pulse duration	<100 fs	< 200 fs		
Repetition rate	20 - 80 MHz	40 MHz or 80 MHz		
M²	<1.2			
Beam waist diameter	1 mm			
Beam pointing	<25 μrad/°C			
Ellipticity	>0.9			
Warm-up time	< 5 min			
Power stability	<1% RMS			
RMS noise	<1% RMS			
Polarization	Linear, >100:1			
External Interfaces	High speed External synchronisation (Sync. Out), communication through USB, RS232, TCP/IP			
Software interfaces	Intuitive GUI, Serial communication Protocol			
Laser head dimensions	397 x 339 x 131 mm³ – 13 kg			
Laser controller dimensions	19"/3U rack – 7,5 kg			
Standard umbilical length	3 m			
Power consumption	100 to 240 VAC < 400 W			
Cooling	Air cooled			
OPTIONS	<b>GDD</b> : Group Delay Dispersion pre-compensation (-130 000fs²).  Electronic setting			
	SHG & THG upon request			
	<b>F-SYNC</b> : Fine-tuning PRF synchronization +/- 1 MHz around a fixed central frequency. Can synchronize with any 3 <sup>rd</sup> party master device.  Electronic setting			









#### CAUTION

CLASS 4 VISIBLE & INVISIBLE LASER RADIATION WHEN OPEN

AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION

SPARK LASERS offers a 24-month warranty for all ALTAIR laser range. For full details of this warranty coverage, please contact us at: <a href="mailto:info@spark-lasers.com">info@spark-lasers.com</a> or call: +33 564 310 484



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<sup>\*</sup>This information is subject to modifications without prior notice.