

# ALTAIR SERIES



<160 FS PULSES / QCW / 80 MHz REPETITION RATE

## HIGH-POWER, HIGH REPETITION RATE FEMTOSECOND LASER FOR BIOPHOTONICS

ALTAIR produces high average power with ultrashort femtosecond pulses (<160 fs) at high repetition rate (80 MHz standard, others optional) 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 fully packaged fiber amplifiers and pulse management, ALTAIR offers remarkable pulse quality at high average power with no maintenance required.

ALTAIR is ideally suited for multi-photon microscopy applications. The 1  $\mu\text{m}$  wavelengths offers many benefits for bioimaging : lower scattering, deeper penetration.

### CORE SPECIFICATIONS

- / High repetition rate : 80 MHz
- / High power : from 1W to 20W
- / < 160 fs

### USABILITY

- / Compact, robust and air-cooled fiber laser
- / Plug'n play : < 5 min set up, sync. out
- / Intuitive user interface

### APPLICATIONS

- / Multiphoton / Two-photon microscopy
- / Neuroscience
- / Optogenetics

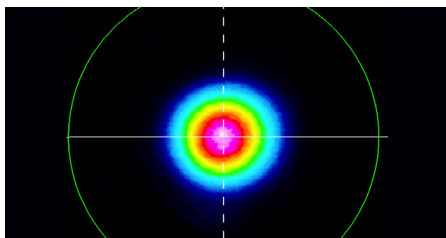
### CUSTOMER CARE

- / 12-month warranty
- / Worldwide technical support
- / Laser customization

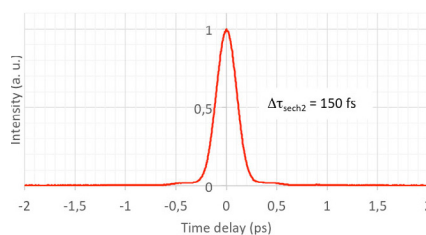
# TECHNICAL SPECIFICATIONS\*

	ALTAIR IR-1	ALTAIR IR-5	ALTAIR IR-10	ALTAIR IR-20
AVERAGE POWER	1W	5W	10W	20W
WAVELENGTH	1040 nm (OTHER OPTIONAL)			
PULSE DURATION	< 160 fs (OTHER OPTIONAL)			
REPETITION RATE	80 MHz (OTHER OPTIONAL)			
M <sup>2</sup>	< 1.2			
BEAM WAIST DIAMETER	1 mm			
BEAM POINTING STABILITY	< 25 μrad/°C			
ELLIPTICITY	> 0.9			
WARM-UP TIME	< 5 min			
POWER STABILITY	< 1% RMS			
RMS NOISE	< 1%			
POLARIZATION	linear, > 100:1			
<b>ELECTRICAL</b>				
EXTERNAL INTERFACES	High speed external synchronisation (Sync. Out), communication through USB, RS 232, TCP/IP			
SOFTWARE INTERFACES	Intuitive GUI, Serial communication protocol			
POWER CONSUMPTION	100 to 240 VAC, < 400 W			
<b>MECHANICAL</b>				
LASER HEAD DIMENSIONS & WEIGHT	397 x 339 x 131 mm <sup>3</sup> – 13 kg			
LASER CONTROLLER DIMENSIONS & WEIGHT	19"/3U rack – 7,5 kg			
STANDARD UMBILICAL LENGTH	3 m			
TECHNICAL DRAWINGS FOR DOWNLOAD	<a href="#">ALTAIR IR</a>			
COOLING	Air cooled			
<b>OPTIONS</b>				
GDD	Group Delay Dispersion pre-compensation (variable down to -90 000fs <sup>2</sup> )			
F-SYNC	Fine-tuning PRF synchronization +/- 1 MHz around a fixed central frequency. Can synchronize with any 3rd party master device. Electronic setting.			
CUSTOM PRIMARY WAVELENGTH	1030 nm, 1055 nm, 1064 nm			
ADDITIONAL WAVELENGTH	515 nm, 520 nm, 530 nm			
CUSTOM PULSE REPETITION FREQUENCY	40 MHz or others			
EXTERNAL AOM	For power modulation			
CUSTOM PULSE DURATION	Upon request			

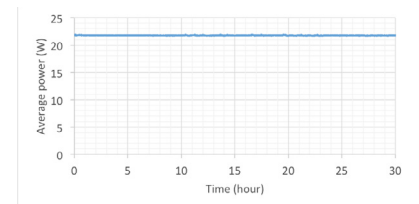
## PERFORMANCE



BEAM PROFILE



AUTOCORRELATION TRACE



AVERAGE POWER STABILITY

\* This information is subject to modifications without prior notice.

