

ALTAIR SERIES



<160 FS PULSES / QCW / 80 MHz REPETITION RATE

HIGH-POWER, HIGH REPETITION RATE FEMTOSECOND LASER FOR BIOIMAGING

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 μm 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

/ 24-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 ² | < 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 | | | |

ELECTRICAL

| | |
|---------------------|--|
| 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 |

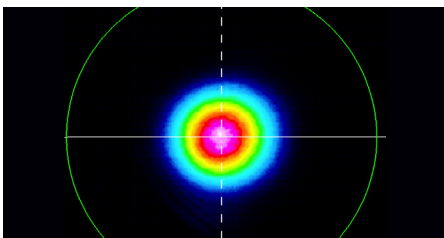
MECHANICAL

| | |
|--------------------------------------|---|
| LASER HEAD DIMENSIONS & WEIGHT | 397 x 339 x 131 mm ³ – 13 kg |
| LASER CONTROLLER DIMENSIONS & WEIGHT | 19"/3U rack – 7,5 kg |
| STANDARD UMBILICAL LENGTH | 3 m |
| TECHNICAL DRAWINGS FOR DOWNLOAD | ALTAIR IR |
| COOLING | Air cooled |

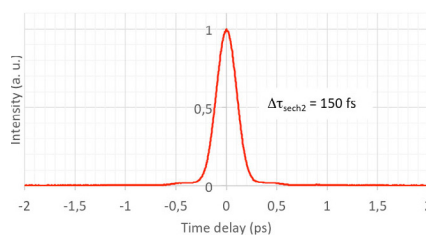
OPTIONS

| | |
|-----------------------------------|--|
| GDD | Group Delay Dispersion pre-compensation (variable down to -90 000fs ²) |
| 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 | 520 nm... |
| CUSTOM PULSE REPETITION FREQUENCY | 40 MHz |
| EXTERNAL AOM | For power modulation |
| CUSTOM PULSE DURATION | Upon request |

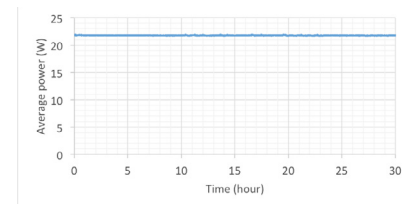
PERFORMANCE



BEAM PROFILE



AUTOCORRELATION TRACE



AVERAGE POWER STABILITY

* This information is subject to modifications without prior notice.

