

# ALCOR 1- $\mu$ m SERIES



<160 FS PULSES / HIGH POWER / HIGH REPETITION RATE

## ULTRA-COMPACT FEMTOSECOND LASER FOR BIOPHOTONICS

ALCOR produces high-average power with ultrashort femtosecond pulses (down to <160 fs) at high repetition rate (80 MHz standard, others optional) in an ultra-compact and robust format. ALCOR is a fiber laser with a best-in-class quality and collimated beam providing high-stability.

Integrating state of the art high-power full package amplifiers and pulse management, ALCOR offers remarkable pulse quality at high average power with no maintenance required.

### CORE SPECIFICATIONS

- / High repetition rate : 80 MHz
- / High power : from 1 W to 2 W
- / < 160 fs (standard)

### USABILITY

- / Ultracompact, robust & air cooled fiber laser
- / Plug'n play : < 5 min set up, sync. out / sync .in
- / Intuitive user interface
- / Additional wavelength in option

### APPLICATIONS

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

### CUSTOMER CARE

- / 24-month warranty
- / Worldwide technical support
- / Laser customization

# TECHNICAL SPECIFICATIONS\*

	ALCOR IR-1	ALCOR IR-2
AVERAGE POWER	1W	2W
WAVELENGTH	1040 nm or 1064 nm (OTHER OPTIONAL)	
PULSE DURATION	< 160 fs (OTHER OPTIONAL)	
REPETITION RATE	Fixed 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	

## ELECTRICAL

EXTERNAL INTERFACES	High speed external synchronisation (Sync. Out), communication through USB, RS 232, TCP/IP with remote control for fast intervention	
SOFTWARE INTERFACES	Intuitive GUI, Serial communication protocol	
POWER CONSUMPTION	100 to 240 VAC, < 400 W	

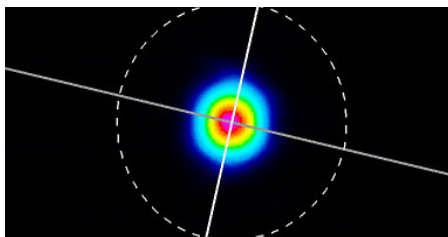
## MECHANICAL

LASER HEAD DIMENSIONS & WEIGHT	235 x 144 x 83.85 mm <sup>3</sup> – < 5 kg (with collimated beam)	
LASER CONTROLLER DIMENSIONS & WEIGHT	19"/3U rack – 7,5 kg	
STANDARD UMBILICAL LENGTH	3 m	
TECHNICAL DRAWINGS FOR DOWNLOAD	<a href="#">ALCOR</a>	
COOLING	Air cooled	

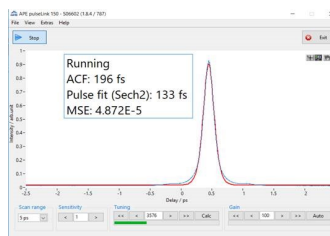
## OPTIONS

GDD	Group Delay Dispersion pre-compensation (variable down to -50 000 fs <sup>2</sup> )	
ADDITIONAL WAVELENGTH	915 to 930 nm	
CUSTOM PULSE REPETITION FREQUENCY	40 MHz	
CUSTOM PULSE DURATION	< 120 fs	

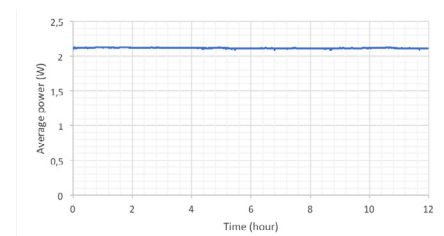
## DIMENSIONS & PERFORMANCE



BEAM PROFILE



AUTOCORRELATION TRACE



AVERAGE POWER STABILITY



**CAUTION**  
CLASS 4 VISIBLE & INVISIBLE LASER  
RADIATION WHEN OPEN  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR SCATTERED RADIATION

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

Contact : +33 564 310 484 / [info@spark-lasers.com](mailto:info@spark-lasers.com)

[www.spark-lasers.com](http://www.spark-lasers.com)