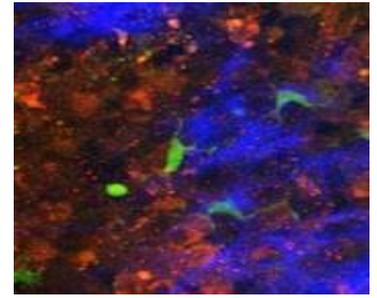


# ALCOR 920-4 W



920 nm / <140 fs PULSES / HIGHEST POWER / HIGH REPETITION RATE

## ULTRA-COMPACT, POWERFUL FEMTOSECOND LASER FOR TWO-PHOTON EXCITATION

ALCOR 920-4W is the ONLY femtosecond laser offering such a high average power with a fixed wavelength at 920 nm with the very same form factor as standard ALCOR series. SPARK LASERS has especially designed and developed this higher power laser for larger surface imaging for Multiphoton microscopy instrumentation and industrial OEM integration working with 24/7 operations, in an ultra-compact, robust and air-cooled format. While being air-cooled and designed with utmost accuracies, it may be mounted in all imaginable positions and environments allowing eased and simplified use with direct injection within any microscope for large span of applications.

The ALCOR 920-4W is ideal for higher power, larger surface unequalled performances with 50 nJ of pulse energy and >350 kW of peak power allowing higher brilliance and contrast for two-photon imaging of green fluorophores (GFP) and calcium indicators such as GCaMP.

This higher power ALCOR keeps offering the widest tunability range for GDD precompensation that can possibly be found on the market.

The laser can be optionally equipped with XSight fully integrated electronics for fine and fast analog power modulation through GUI or TTL signal including gating.

SPARK LASERS is leading the market since ALCOR has been answering market's needs by offering single wavelength, designed for microscopy, advanced features, maintenance-free, best-in-class per its cost of ownership/performance report.

# TECHNICAL SPECIFICATIONS\*

	ALCOR	ALCOR XSight
AVERAGE POWER	4W	3W
WAVELENGTH	920 nm	
PULSE DURATION	<140 fs (with standard GDD precompensation from 0 down to - 30 000 fs <sup>2</sup> (OTHERS OPTIONAL))	
REPETITION RATE	Fixed 80 MHz (OTHER OPTIONAL)	
M <sup>2</sup>	<1.3	
OUTPUT BEAM DIAMETER	1 mm	1 mm
MODULATION	N/A	TTL & ANALOG
ELLIPTICITY	> 0.9	
POWER ADJUSTMENT	Alignment mode or Full power	0 to 100 %
WARM-UP TIME	< 5 min	
POWER OUTPUT	FREE SPACE	
POWER STABILITY & RMS NOISE	< 1% RMS	< 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, < 150 W	

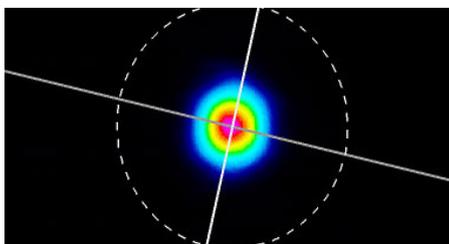
## MECHANICAL

LASER HEAD DIMENSIONS & WEIGHT	252 x 151 x 91 mm <sup>3</sup> < 5 kg (with collimated beam)	387 x 151 x 91 mm <sup>3</sup> < 7 kg (with collimated beam)
LASER CONTROLLER DIMENSIONS & WEIGHT	19"/3U rack – 7,5 kg	
STANDARD UMBILICAL LENGTH	2 m	
COOLING	Air cooled	

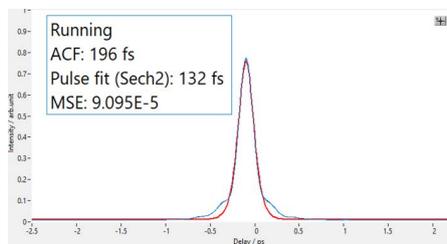
## OPTIONS

CUSTOM PULSE REPETITION FREQUENCY	40 MHz
CUSTOM PULSE DURATION	Any other pulse duration available upon request

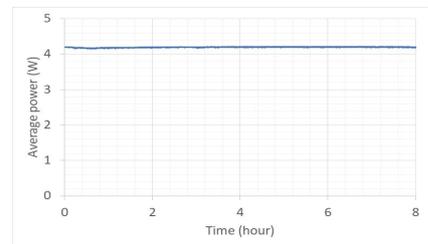
## DIMENSIONS & PERFORMANCE



BEAM PROFILE



AUTOCORRELATION TRACE



AVERAGE POWER STABILITY



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

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