## **ALCOR** 1064-5 W





1064 nm / <130 fs PULSES / HIGHEST POWER / HIGH REPETITION RATE

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

ALCOR 1064-5W offers femtosecond pulses at high average power with a fixed wavelength at 1064 nm in an ultra compact, robust footprint whilst being air-cooled. SPARK LASERS has especially designed and developped this high power laser for larger surface imaging for Multiphoton microscopy instrumentation. This laser source embeds industrial grade components for OEM integration working with 24/7 operations. Its design and accuracies allow it to inject its beam directly within all microscopes for large span of applications. ALCOR 1064-5W is so stable it can even be mounted in all imaginable positions and environments.

The ALCOR 1064-5W is the ideal fit for applications needing high power, large surface treatment with unequalled performances with >60 nJ of pulse energy and >480 kW of peak power allowing higher brilliance and contrast for two-photon excitation of calcium indicators such as red opsins (RCaMP, tdTomato, and others).

This higher power ALCOR keeps offering a wide tunability range for GDD precompensation (whether negative or positive).

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.

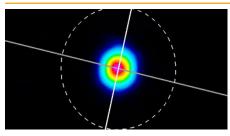
SPARK LASERS is leading the market with ALCOR that has been answering market's needs by offering single wavelength, designed for microscopy, advanced features, maintenance-free, with best-in-class cost of ownership vs. performance.

Contact: +33 557 977 472 / info@spark-lasers.com

## **TECHNICAL SPECIFICATIONS\***

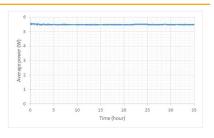
	ALCOR		ALCOR XSight	
AVERAGE POWER	5W		>4W	
WAVELENGTH	1064 nm			
PULSE DURATION	$<\!\!130$ fs (with standard GDD precompensation from 0 down to - 30 000 fs² (OTHERS OPTIONAL)			
REPETITION RATE	Fixed 80 MHz (other optional)			
$M^2$	<1.3			
OUTPUT BEAM DIAMETER	1.5 mm		1.5 mm	
MODULATION	N/A		TTL & 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, > 95%			
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 m < 5 kg (with collimate		387 x 151 x 91 mm³ < 7 kg (with collimated beam)	
LASER CONTROLLER DIMENSIONS	& WEIGHT 19"/3U rack – 7,5 kg			
STANDARD UMBILICAL LENGTH	3 m			
COOLING		Air cooled		
OPTIONS				
CUSTOM PULSE REPETITION FREQ	UENCY	40 MHz or others (with same pulse energy)		
CUSTOM PULSE DURATION		Any other pulse duration available upon request		

## **DIMENSIONS & PERFORMANCE**



AUTOCORRELATION TRACE **BEAM PROFILE** 

Running processor ACF: 184 fs Pulse fit (Sech2): 125 fs MSE: 1.393E-4



AVERAGE POWER STABILITY









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