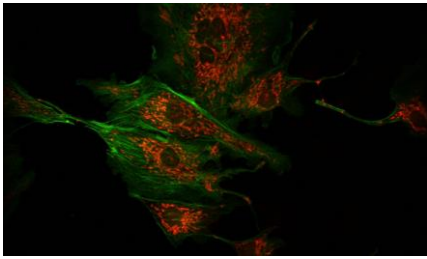
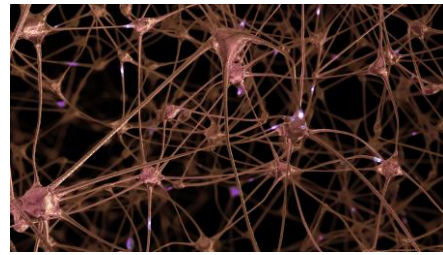


# DIADEM 920



Two-photon microscopy



Neuroscience



## COMPACT VARIABLE FREQUENCY FEMTOSECOND LASER

**920 nm, variable repetition rate, high energy**

DIADEM 920 is a compact fiber laser designed to offer wide variability for advanced experiments involving two-photon excitation.

DIADEM 920 offers software-controlled variable repetition rates which can be changed on the fly from 0 to 40 MHz. Users can therefore optimize repetition rate in their demanding applications. With high energy and short pulse duration, DIADEM 920 offers remarkable peak power which allows multi-plane or multi-spot two-photon excitation. DIADEM 920 incorporates an AOM-based modulator to change power or modulate intensity with a modulation bandwidth exceeding 1 MHz. In addition, computer controlled GDD precompensation ensures optimal brightness is achieved under all conditions. With these outstanding characteristics, DIADEM 920 can compete directly with bulky and expensive lasers based on OPCPA.

# TECHNICAL SPECIFICATIONS\*

General	DIADEM 920
Wavelength	920 nm
Maximum average power	4 W
Pulse duration	< 250 fs
Repetition rate	0 to 40 MHz
Energy per pulse	1 µJ up to 4 MHz (500 nJ at 8 MHz, 400 nJ at 10 MHz...)
GDD precompensation	Software controlled from 0 to -300 000 fs <sup>2</sup>
Beam parameters	
M <sup>2</sup>	< 1.3
Ellipticity	> 0.85
Output beam	Collimated
Polarization	> 100:1, vertical
Stability	
Power stability RMS	< 1%
Pulse to pulse stability RMS	< 1%
Pointing stability	< +/- 25 µrad/°C
Electrical	
External interfaces	RS-232, USB, TCP/IP
Synchronized input	Sync in for pulse-on-demand
Synchronization output	TTL
Pulse power control	Analog modulation + fast gating (> 1MHz Bandwidth) + software controlled energy
Software interfaces	GUI, RS-232 serial communication protocol
Power consumption	< 250 W
Cooling	Air
Mechanical	
Laser head dimensions	330 x 280 x 104 mm
Control unit	19"/ 3U rack
Umbilic length	3 m
Environmental	
Operational temp range	20-26°C
Storage temp range	0-40°C
Operational max altitude	2000 m
Operational humidity	Non condensing
Storage humidity	80% RH

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

