Amplitude SYSTEMES

Mikan

Air-cooled high power ultrafast oscillator

A new generation of ultrafast lasers

Mikan is an ultra-compact, reliable and turn-key femtosecond laser oscillator with high average power.

Mikan benefits from extensive developments of Amplitude Systemes in the field of laser materials and femtosecond technology, achieving new levels of performance and ease of use.

Mikan takes full advantage of high quality Ytterbium doped materials. Directly diode-pumping of Ytterbium lasers offers reliability, efficiency, a small footprint, a very high thermal efficiency, as well as the capability to generate femtosecond pulses with a high average power.

The exceptional specifications and high efficiency of the laser are the result of high performance pumping optics, a compact laser resonator, a self-starting, all solid-state mode-locking technology.

With its low electrical consumption and air-cooling system, **Mikan** is designed for simple daily operation, a short warm-up time and an excellent repeatability.

Mikan offers a unique optional fiber output for easy set-up and coupling to the user's experiments.

It is the laser of choice for many demanding applications, such as multiphoton microscopy, THz, metrology, cell ablation, photo-acoustic studies, amplifier seeding, or non linear optics.

Features:

> Air-cooled

> Fiber coupled output option

> High average power

> Ultra-compact

> Excellent pulse-to-pulse stability

> Ideal for biophotonics and imaging applications

Mikan

Air-cooled, fiber coupled
high power ultrafast oscillator

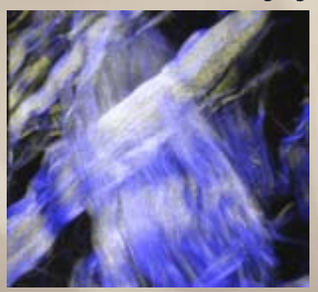
Application example:

Biology

Multiphoton microscopy is a powerful and versatile technique, applied in numerous fields in biology, such as neurology or embryology. It relies on an ultrafast laser to excite fluorescent molecules or proteins.

Mikan is an ideal excitation source for multiphoton microscopy. In addition to its extremely small size and ease of use, its infrared wavelength minimizes autofluorescence, scattering in biological tissues and cell toxicity.

Mikan is optimized for new fluorophores such as DsRed, while maintaining a high efficiency on GFP. Moreover, **Mikan** can be used for 3 photons excitation and is an ideal tool for SHG and THG imaging.



Mikan optional fiber output, enables a direct connection to the microscope without the need of complicated alignment.

Finally, **Mikan** high energy per pulse improves signal to noise ratio and is ideal for in-depth imaging.

Specifications:

	Mikan
Pulse duration	200 fs
Average power	> 1 W
Pulse energy	20 nJ
Repetition rate	54 MHz
Wavelength	1030 nm
M2	1,2
Beam quality	TEM_{00}
Dimensions	33 x 18 cm

Other specifications available on request. Please contact us.

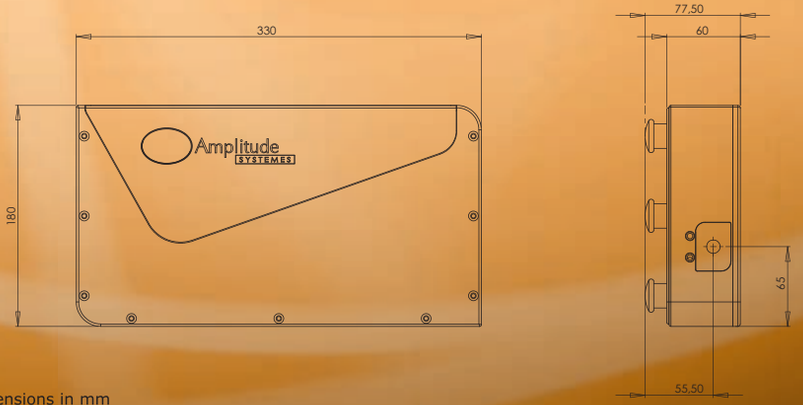
Options:

- Femtosecond **fiber output** for easy set-up and coupling to the user experiments

- Femtosecond **continuum generation** option: the output of the laser is coupled into a suitably designed fiber, in order to broaden the spectral emission. Using a special photonics cristal fiber maintains an ultrashort pulse duration at the output of the system.

- **Second harmonic generator** (SHG)

Mechanical interface:



* Dimensions in mm

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