

ps

ns

VERSATILE PULSED LASER MODULE

KATANA



+

SWISS MADE

Katana is a versatile, sub-nanosecond laser system designed for all industrial applications that require maintenance-free operation, continuous tuning of the repetition rate and low cost of ownership. It can provide pulses from **30 ps up to 10 ns** in pulse duration. The Katana laser can be operated from **pulse-on-demand** up to **100 MHz**, and it can also easily be triggered from an external source (master or slave mode). A single-box multi-wavelength version is available which, combined with the use of the Katana HP as a depletion laser, can provide a complete source for super-resolution fluorescence microscopy.

EXTERNAL TRIGGERING AT ANY FREQUENCY

OPTIONS:

- + Single-box multi-wavelength emission
- + Burst mode
- + Isolator /collimator output
- + Second harmonic generation
- + Fiber output (PM of SM)
- + More options on request

MAIN APPLICATIONS:

- + Multi-wavelength excitation for fluorescence microscopy
- + Seed for amplifiers
- + Laser ranging
- + Semiconductor inspection
- + Single photon counting

OUTSTANDING FEATURES :

- + External laser triggering
- + Continuously tunable repetition rate
- + Pulse on demand
- + Master/slave operation
- + Diffraction-limited beam quality
- + Lightweight
- + Maintenance free – no alignment required
- + 24/ 7 operation



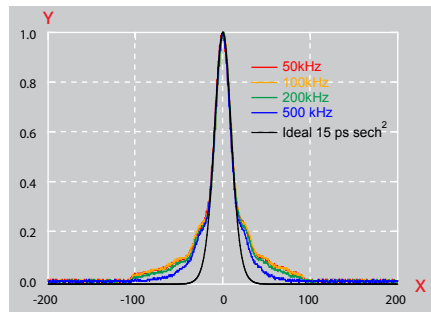
	KATANA - 05	KATANA - 06	KATANA - 08	KATANA - 10	KATANA - 15
CENTER WAVELENGTH	512 – 532 nm	550 – 660 nm	775 nm	1030 – 1064 nm	1550 nm
PULSE DURATION ^{1,2}	< 30 ps – 10 ns	70 ps – 10 ns	< 30 ps – 10 ns	< 30 ps – 10 ns	< 30 ps – 10 ns
AVG. OUTPUT POWER [UP TO] ²	50 mW	20 mW	50 mW	500 mW	500 mW
PULSE ENERGY [UP TO] ²	20 nJ	20 nJ	20 nJ	100 nJ	100 nJ
PULSE REPETITION RATE ¹	pulse-on-demand – 100 MHz				
SPECTRAL BANDWIDTH	0.1 nm				
BEAM QUALITY	$M^2 < 1.1$, TEM ₀₀				
PER	> 20 dB				
AMPLITUDE NOISE	< 4.0 % rms (10 h)				
LASER OUTPUT	PM fiber output (free-space optional)				
ENVIRONMENTAL					
WARM-UP TIME	< 15 minutes				
OPERATION TEMPERATURE	15 °C – 35 °C				
STORAGE TEMPERATURE	- 20 °C – 65 °C				
ON/OFF CYCLES	> 10000				
MECHANICAL					
SIZE OEM LASER	32 x 374 x 184 mm ³				
WEIGHT OEM LASER	2 kg				
SIZE CONTROL UNIT	133 x 483 x 400 mm ³ (19"/3U rack mount)				
WEIGHT CONTROL UNIT	7 kg				
ELECTRICAL					
POWER SUPPLY	24 VDC/2.5 A or 90 – 264 VAC, 47 – 63 Hz				
POWER CONSUMPTION	15 W				
COOLING					
LASER SYSTEM	air cooled				

¹ More wavelengths available on request

² Please inquire for possible combinations of average power, pulse energy and repetition rate

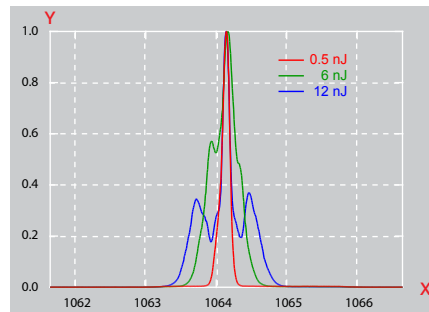


PULSE PROFILE



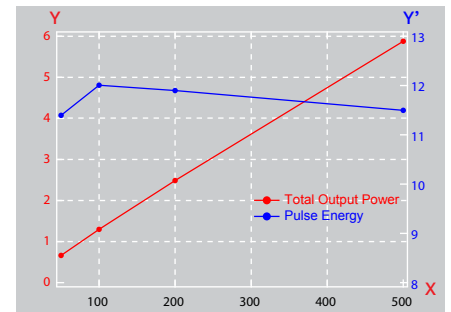
X TIME DELAY (PS)
Y AUTOCORRELATION SIGNAL

OPTICAL SPECTRUM



X WAVELENGTH (nm)
Y SPECTRAL POWER DENSITY (nm⁻¹)

OUTPUT POWER VS REPETITION RATE



X REPETITION RATE (kHz)
Y AVERAGE OUTPUT POWER (mW)
Y' PULSE ENERGY (nJ)

NEW

SINGLE-BOX MULTI-WAVELENGTH KATANA - 05/06

