

Onefive KATANA

Versatile pulsed laser

- External triggering
- Continuously tunable repetition rate
- Master/slave operation
- Pulse-on-demand
- Diffraction-limited beam
- Maintenance-free 24/7 operation



If you need a versatile, sub-nanosecond laser system designed for all industrial applications, the KATANA laser is an excellent choice.

In the standard configuration, the KATANA provides pulses of 35 ps duration but other options – from 30 ps up to 10 ns – are available. Depending on the model, the pulse repetition rate spans from pulse-on-demand up to 100 MHz. The standard is either 0.05 to 1 MHz or 20 to 80 MHz.

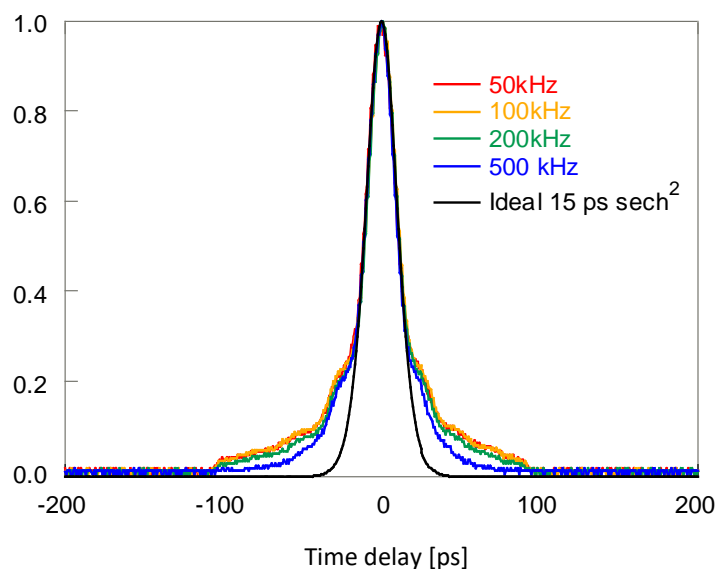
The laser pulse can be triggered from an external source (in either master or slave mode). Continuous tuning of the repetition rate is standard.

No alignment is required making the KATANA maintenance-free and ensures you a low cost of ownership.

Applications

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

Typical pulse profile - Autocorrelation signal



Standard configurations

Optical

Model	KATANA 05	KATANA 08	KATANA 10	KATANA 15
Center wavelength ¹⁾	532 ± 2 nm	775 ± 2 nm	1064 ± 2 nm	1550 ± 3 nm
Pulse duration ¹⁾	35 ± 15 ps			
Average power ¹⁾	>5 mW at 1 MHz	>60 mW at 80 MHz	>10 mW at 1 MHz ²⁾	>100 mW at 80 MHz ²⁾
Pulse energy ¹⁾	>5 nJ at 1 MHz	>0.75 nJ at 80 MHz	>10 nJ at 1 MHz	>1.25 nJ at 80 MHz
Repetition rate ¹⁾	0.05—1 MHz	20—80 MHz	0.05—1 MHz	20—80 MHz
Spectral bandwidth FWHM	<0.3 nm	< 0.2 nm	<0.4 nm	<0.5 nm
Beam quality	M ² <1.3, TEM ₀₀		M ² <1.1, TEM ₀₀	
PER	>20 dB	>23 dB	>20 dB	>20 dB
Amplitude noise	<4.0% rms (10h)			
Timing jitter	<10 ps			
Laser output	Collimated free space		Single mode PM fiber, FC/APC ³⁾	

¹⁾ Please inquire for possible combinations of wavelength, pulse duration, average power, pulse energy and repetition rate

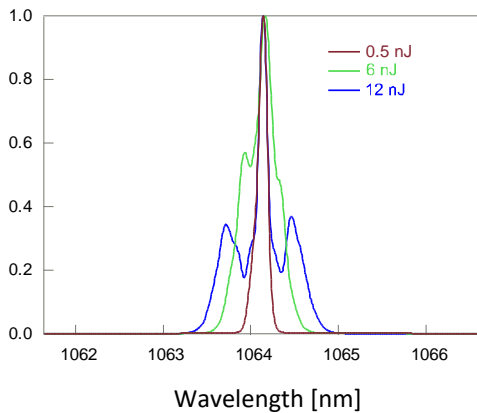
²⁾ Ex. fiber

³⁾ Armored single mode fiber, 20 or 50 cm, other lengths are available

Mechanical/Electrical

Warm-up time	<15 minutes
Operation temperature	15°C—35°C
Storage temperature	-20°C—55°C
Power supply	24 VDC/2.5 A or 90—264 VAC, 47—63 Hz
Power consumption	15 W
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
Cooling	Air

Typical spectral power density [nm⁻¹]



Support and Warranty

All KATANA products come with industry-leading reliability and are backed by our standard 2 year warranty.

However, should you need the extra security of an extended warranty and remote diagnostics support this is available in our support and warranty extension package.

Please contact your sales representative for more information.

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See www.nktpotonics.com for global offices and distributors

All KATANA products are produced under our quality management system certified in accordance with the ISO 9001:2015 and ISO 13485:2016 standard.

