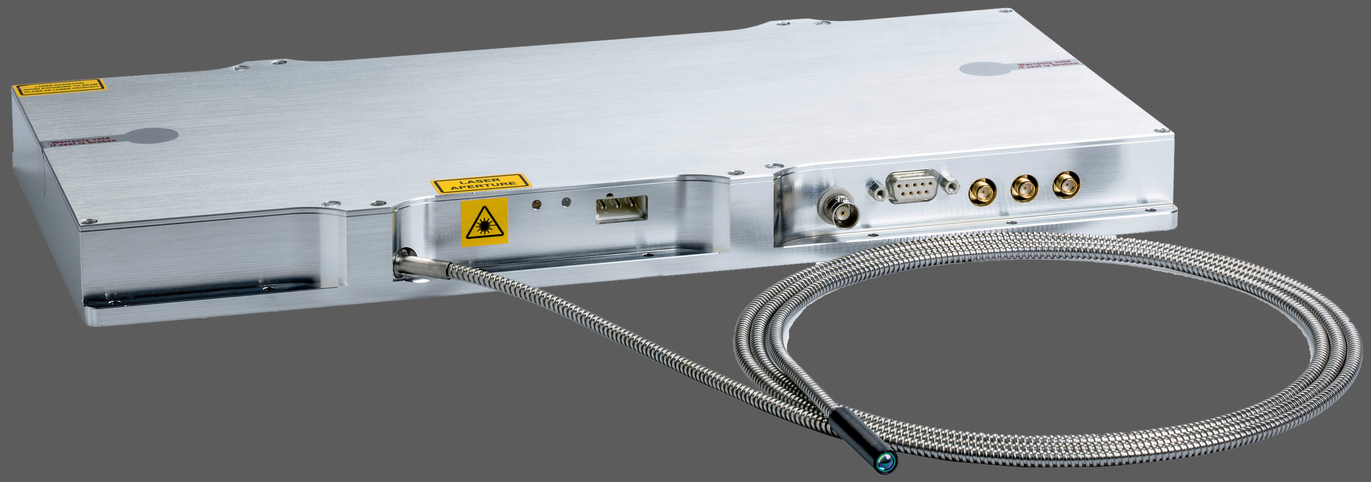
NKT Photonics



KATANA

Sub-nacosecond pulsed laser

Versatile sub-nanosecond laser system

Ideal for synchronous and precise industrial processes

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

KATANA

Applications

Laser ranging

Seed for amplifiers

Single-photon counting

Semiconductor inspection

Multi-wavelength excitation for fluorescence microscopy

Reliable

Pulse on demand and flexible repetiton rate
In the standard configuration, the KATANA provides pulses of 35 ps duration. Options from 30 ps up to 10 ns are available upon request.

With customisation of the Katana, depending on the model, the pulse repetition rate spans from pulse-on-demand up to 100 MHz.

Standard repetition rate is either 0.05 to 1 MHz or 20 to 80 MHz.

Master and slave operation
The KATANA's unique design allows operation in master or slave configurations to provide extreme flexibility to users.

Robust and maintenance-free
The KATANA has been designed with maintenance-free 24/7 industrial operation in mind to eliminate down-time and cost of ownership.

Generate pulses of arbitrary amplitude
The KATANA can operate in burst-mode, which allows generation of pulses of arbitrary amplitude and sequence.

Flexible output
Choose the output that suits the application: Isolator or collimator, single-mode or polarization maintaining fiber.

Features
External triggering
Continuously tunable repetition rate
Master/slave operation
Pulse-on-demand
Diffraction-limited beam
Light-weight
Maintenance-free 24/7 operation
OEM package available

Options
Burst mode
Isolator/collimator output
PM or SM fiber output

KATANA

Support and warranty

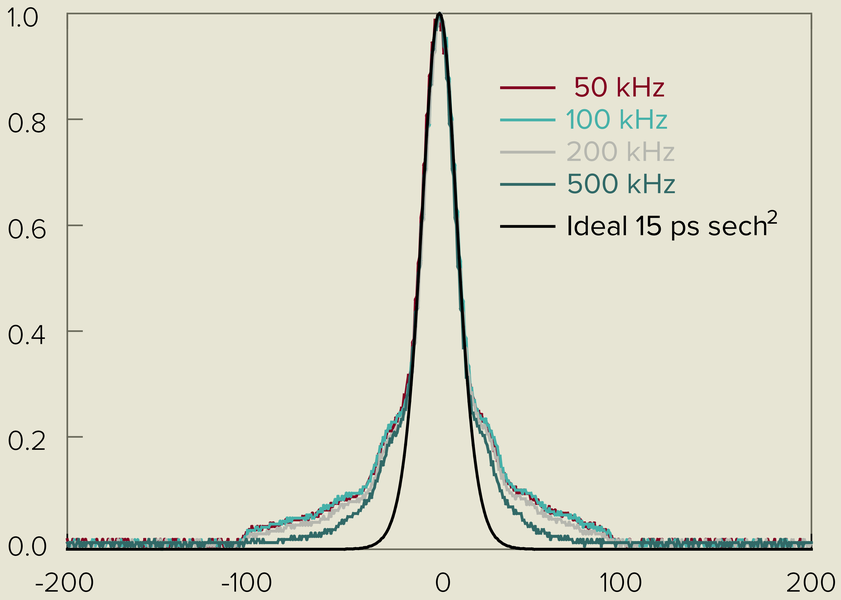
All KATANA products come with an industryleading reliability.

The product is covered by a comprehensive warranty. Service options are available. For details, please enquire.

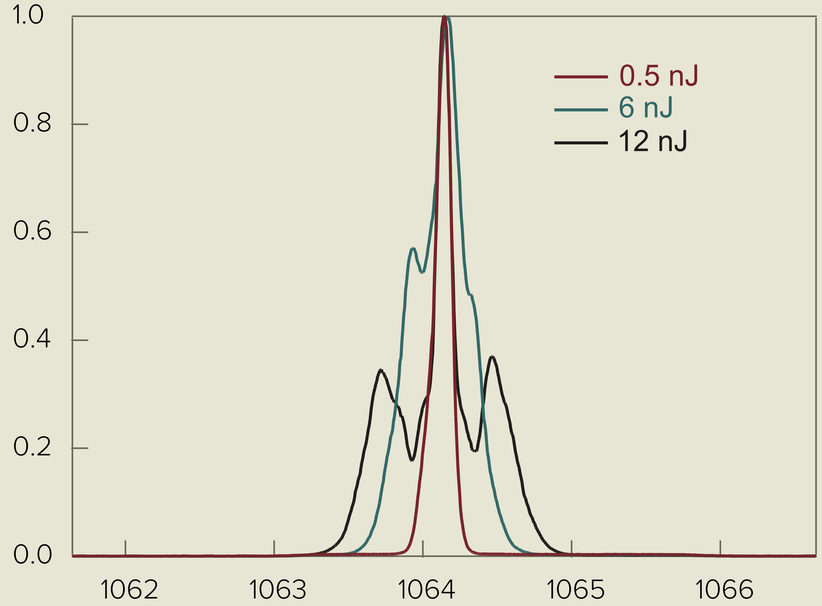
Performance

KATANA

Typical pulse profile - Autocorrolation



Typical spectral power density [nm-1]



Specifications

KATANA

Optical[1]

	05	08	10	15
Center wavelength [nm]	532 ± 1	775 ± 2	1064 ± 2	1550 ± 3
Average Power [mW]	> 5 @ 1 MHz	> 60 @ 80 MHz	> 10 @ 1 MHz [2]	> 100 @ 80 MHz [2]
Pulse duration [ps]	35 ± 15	35 ± 15	35 ± 15	35 ± 15
Pulse energy [nJ]	> 5 @ 1 MHz	> 0.75 @ 80 MHz	> 10 @ 1 MHz	> 1.25 @ 80 MHz
Repetition rate [MHz]	0.05 – 1	20 – 80	0.05 – 1	20 – 80
Spectral bandwidth (FWHM) [nm]	< 0.3	< 0.2	< 0.4	< 0.5
Beam quality (TEM_{00})	$M^2 \leq 1.3$	$M^2 \leq 1.3$	$M^2 \leq 1.1$	$M^2 \leq 1.1$
Polarization / PER (vertical) [dB]	> 20	> 23	> 20	> 20
Amplitude noise (RMS, 10h) [%]	< 4.0	< 4.0	< 4.0	< 4.0
Timing jitter [ps]	< 10	< 10	< 10	< 10
Laser output	Collimated free-space	Collimated free-space	Single-mode PM fiber, FC/APC [3]	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] Exclusive fiber.
[3] Armored single-mode fiber, 20 or 50 cm (other lengths are available).

Specifications

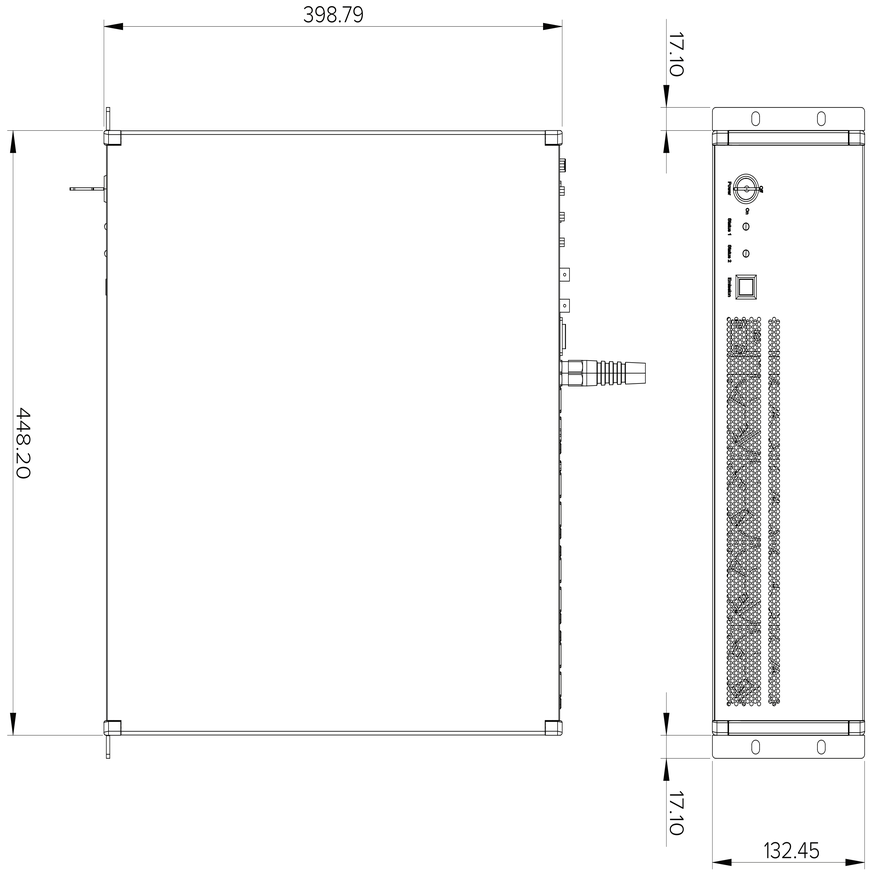
KATANA

Mechanical/Electrical

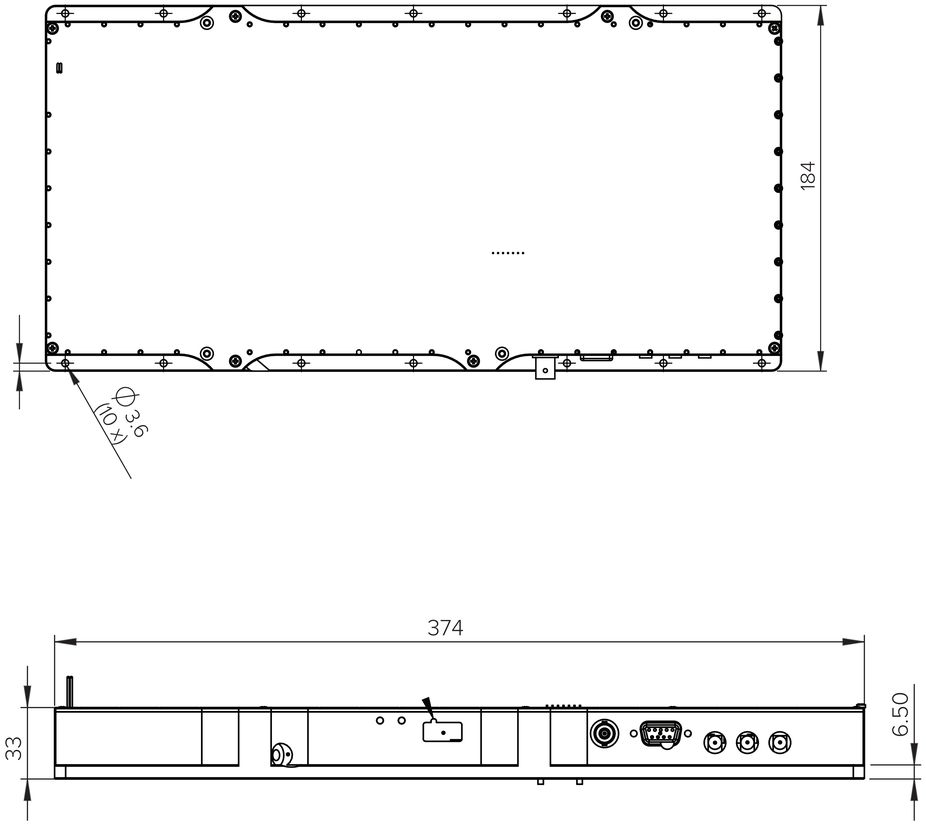
Warm-up time [min.]	< 15
Power consumption [W]	15
Operation temperature [°C]	15 – 35
Storage temperature [°C]	-20 – 55
Laser head dimensions (WxHxL) [mm]	448 x 132 x 398 (19”/3U rack mount)
Power supply requirements	24 VDC/2.5A or 90-264 VAC, 47-63 Hz
Laser weight [kg]	7
OEM laser dimensions (WxHxL) [mm]	374 x 33 x 184
OEM laser weight [kg]	2
Cooling	Air

Technical Drawings

19” rack laser



OEM laser



KATANA

All NKT Photonics products are produced under our quality management system certified in accordance with the ISO 9001:2015 standard.

FORCE Certification
Certification of Management Systems

SOLUTIONS FOR INNOVATORS

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