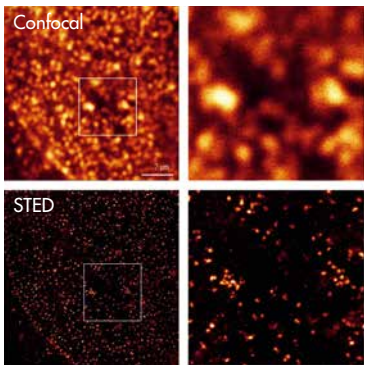
Katana HP

Multi-wavelength, high power, pulsed laser module

Swiss Made

PRISM AWARDS FINALIST

Katana HP is a versatile, pulsed laser system designed for all industrial applications that require continuous tuning of the repetition rate, maintenance-free operation and low cost of ownership. The Katana laser can be triggered from pulse-on-demand up to 100 MHz from either an internal or an external source (master or slave mode), and can provide pulses from 30 ps up to 10 ns in pulse duration. Katana HP has already proven to be an ideal, robust source as depletion laser for super-resolution STED fluorescence microscopy, for which application it can also provide a complete solution when combined with the Katana single-box multi-wavelength excitation system.



Resolution enhancement achieved with Leica TCS SP8 STED 3X and the 775 nm Katana-08 HP pulsed laser, compared to the resolution achieved with confocal microscopy. Courtesy of Leica Microsystems

Laser outstanding features:

- Infrared: 775 nm, 1064 nm, 1200 nm, 1550 nm
- Orange: 556 – 620 nm
- Red: 620 – 660 nm
- Green: 532 nm
- Pulse duration: 30 ps – 10 ns
- Continuously tunable pulse repetition rate
- Master/slave operation
- External triggering
- Pulse-on-demand
- Maintenance free – no alignment required
- 24/7 operation

Options:

- UVA 355 nm
- UVC 266 nm
- Burst mode
- Isolator/collimator output
- More options on request

Main applications:

- Depletion laser for STED microscopy
- Fluorescence microscopy
- Solar cell scribing and contacting
- Spectroscopy
- Laser ranging

Picosecond & Nanosecond Laser

Katana HP

Laser specifications	Katana - 05 HP	Katana - 06 HP	Katana - 08 HP	Katana - 10 HP	Katana - 12 HP	Katana - 15 HP
Center wavelength[1]	**515 – 532 nm**	**556 – 660 nm**	**775 nm**	**1030 – 1064 nm**	**1112 – 1320 nm**	**1550 nm**
Pulse Duration[1]	<30 ps – 10 ns	<200 ps – 10 ns	<30 ps – 10 ns	<30 ps – 10 ns	<200 ps – 10 ns	<30 ps – 10 ns
Avg. output power (up to)[1]	5 W	1 W	8 W	20 W	2 W	14 W
Pulse energy (up to)[1]	5 µJ	50 nJ	1 µJ	10 µJ	100 nJ	3 µJ
Peak power (up to)[1]	500 kW	100 kW	10 kW	1 MW	200 kW	100 kW
Pulse repetition rate[1]	pulse-on-demand – 100 MHz					
Spectral bandwidth	> 0.1 nm					
Beam quality	M^2 < 1.3, TEM_{00}					
PER	> 23 dB					
Amplitude noise	< 4.0% rms (10 h)					
Laser output	Collimated free-space					
Environmental						
Warm-up time	< 15 minutes					
Operation temperature	15 °C – 35 °C					
Storage temperature	-20 °C – 65 °C					
On/Off cycles	> 10000					
Mechanical						
Size laser head	39 x 100 x 162 mm^3					
Weight laser head	1 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/9A or 90 – 264 VAC, 47 – 63 Hz					
Power consumption	< 300 W					
Cooling						
Laser system	air cooled					

[1] Please inquire for possible combinations of wavelength, pulse duration, pulse energy and repetition rate

RoHS compliant

CE

DANGER

CLASS 4 LASER

IEC Compliant Product

IEC 60068-2-27:2008
IEC 60068-2-6:2007
Shock & Vibration Test

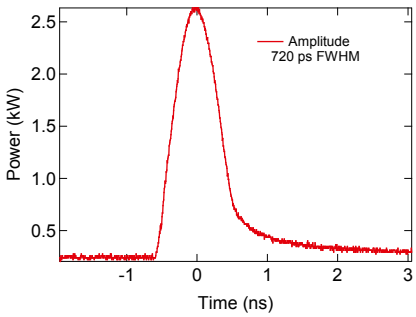
IEC 61010-1:2010
IEC 61326-1:2012
Electromagnetic Compatibility

IEC 60825-1:2014
Laser Radiation Safety

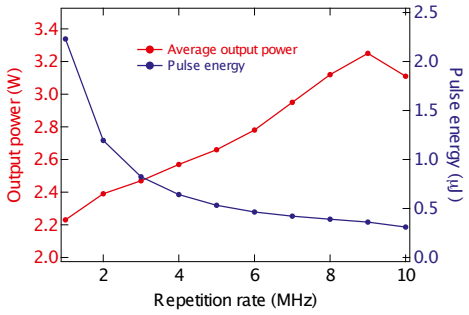
ISO Certified Company

ISO 9001:2008
ISO 13485:2012

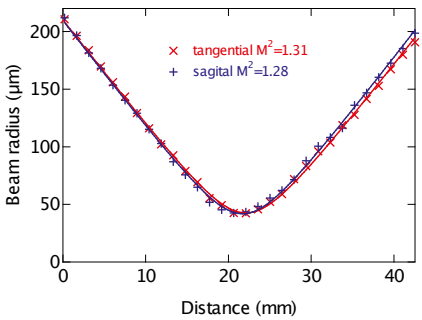
Pulse profile



Output power vs Repetition Rate



Beam quality



Specifications subject to change without notice, March 2016

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