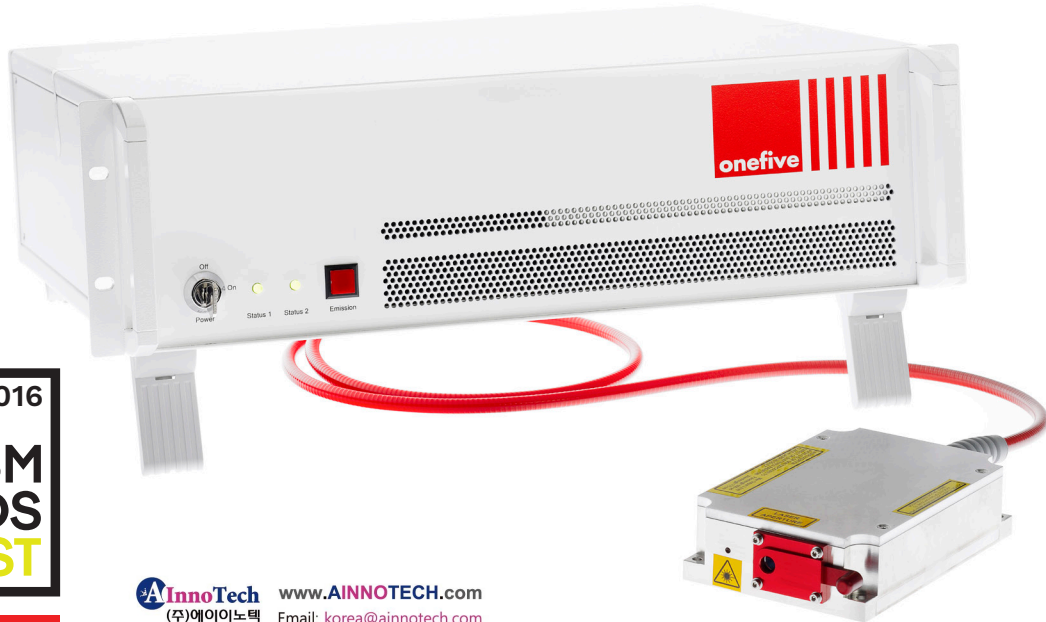


ps ns

MULTI-WAVELENGTH, HIGH POWER, PULSED LASER MODULE

# KATANA HP



SWISS MADE

**AInnoTech** www.AINNOTECH.com  
(주)에이이노텍 Email: korea@ainnotech.com  
**FiberAll** TEL:02.409.3222 FAX:02.409.3229  
www.FIBERALL.co.kr 서울시 송파구 가락동 10-9 현성 B/D 2F  
광통신 전문 소평출! 파이버출!

**THE HIGH POWER, PICOSECOND LASER IN GREEN, YELLOW, ORANGE RED AND INFRARED**

Katana HP is a versatile, **sub-nanosecond** 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 a 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.

**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

**OUTSTANDING FEATURES :**

- + Infrared: 775, 1064, 1200 & 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

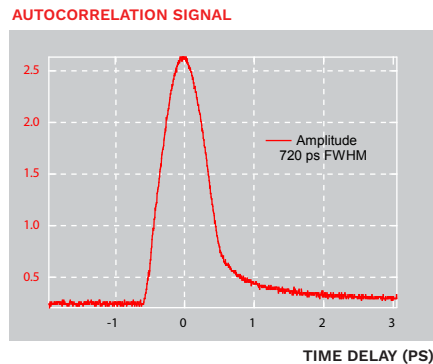


	KATANA - 15 HP	KATANA - 12 HP	KATANA - 10 HP	KATANA - 08 HP	KATANA - 06 HP	KATANA - 05 HP
<b>CENTER WAVELENGTH</b>	1550 nm	1112 – 1320 nm	1030 – 1064 nm	775 nm	556 – 660 nm	512 – 532 nm
<b>PULSE DURATION</b> <sup>1</sup>	< 30 ps – 10 ns	< 200 ps – 10 ns	< 30 ps – 10 ns	< 30 ps – 10 ns	< 200 ps – 10 ns	< 30 ps – 10 ns
<b>AVG. OUTPUT POWER</b> [UP TO] <sup>1</sup>	14 W	2 W	20 W	8 W	1 W	5 W
<b>PULSE ENERGY</b> [UP TO] <sup>1</sup>	3 μJ	100 nJ	10 μJ	1 μJ	50 nJ	5 μJ
<b>PEAK POWER</b> [UP TO] <sup>1</sup>	100 kW	8 kW	400 kW	50 kW	2 kW	200 kW
<b>PULSE REPETITION RATE</b> <sup>1</sup>	pulse-on-demand – 100 MHz					
<b>SPECTRAL BANDWIDTH</b>	> 0.1 nm					
<b>BEAM QUALITY</b>	$M^2 < 1.3$ , TEM <sub>00</sub>					
<b>PER</b>	> 23 dB					
<b>AMPLITUDE NOISE</b>	< 4.0 % rms (10 h)					
<b>LASER OUTPUT</b>	Collimated free-space					
<b>ENVIRONMENTAL</b>						
<b>WARM-UP TIME</b>	< 15 minutes					
<b>OPERATION TEMPERATURE</b>	15 °C – 35 °C					
<b>STORAGE TEMPERATURE</b>	- 20 °C – 65 °C					
<b>ON/OFF CYCLES</b>	> 10000					
<b>MECHANICAL</b>						
<b>SIZE LASER HEAD</b>	39 x 100 x 162 mm <sup>3</sup>					
<b>WEIGHT LASER HEAD</b>	1 kg					
<b>SIZE CONTROL UNIT</b>	133 x 483 x 400 mm <sup>3</sup> (19"/3U rack mount)					
<b>WEIGHT CONTROL UNIT</b>	7 kg					
<b>ELECTRICAL</b>						
<b>POWER SUPPLY</b>	24 VDC/9A or 90 – 264 VAC, 47 – 63 Hz					
<b>POWER CONSUMPTION</b>	< 300 W					
<b>COOLING</b>						
<b>LASER SYSTEM</b>	air cooled					

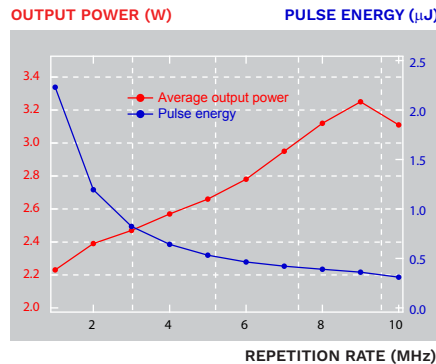
<sup>1</sup> Please inquire for possible combinations of wavelength, pulse duration, pulse energy and repetition rate



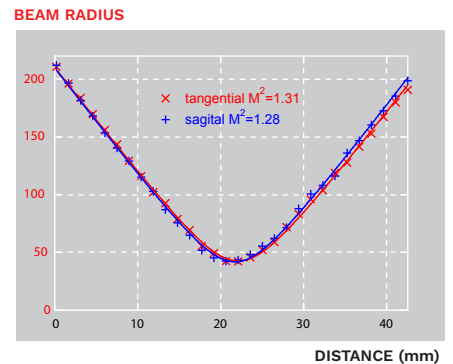
#### PULSE PROFILE



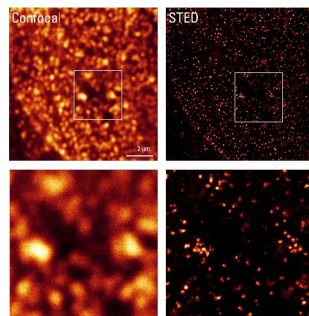
#### OUTPUT POWER VS REPETITION RATE



#### BEAM QUALITY



#### APPLICATION



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