

Katana XP has been designed to offer synchronization compatibility with any industrial process. Its unique **externally triggerable** and **continuously tunable repetition rate**, in both slave and master operation mode, makes it the most versatile high energy laser on the market for fast, synchronous and precise industrial processes. Katana XP can also operate in **burst-mode**, which allows generating pulses of arbitrary amplitude and sequence.

**THE LASER THAT CAN ADAPT AND SYNCHRONIZE TO ANY SPEED CHANGE**

**OPTIONS:**

- + Green 532 nm
- + UVA 355 nm
- + UVC 266 nm
- + Efficient green and UV generation over
- + wide range of repetition rates
- + Motorized switching between wavelengths

**MAIN APPLICATIONS:**

- + Micromachining
- + Solar cell scribing and contacting
- + Plasma generation
- + Nonlinear optics
- + Material research
- + Laser ranging

**OUTSTANDING FEATURES :**

- + External triggering
- + Continuously tunable repetition rate
- + Master/slave operation
- + Pulse-on-demand
- + Burst mode: programmable pulse sequence with arbitrary amplitude
- + Adjustable pulse energy
- + Diffraction-limited beam
- + No ASE background
- + Maintenance free – no alignment required
- + 24/ 7 operation

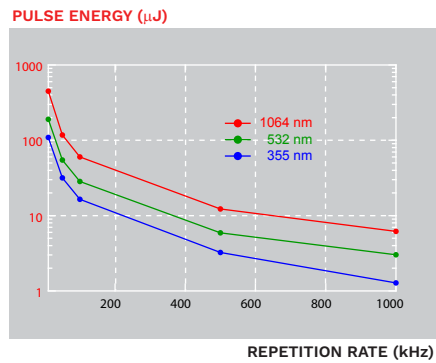


	KATANA - 02 XP	KATANA - 03 XP	KATANA - 05 XP	KATANA - 10 XP
CENTER WAVELENGTH	266 nm	355 nm	532 nm	1064 nm
PULSE DURATION	30 ps – 1 ns	30 ps – 1 ns	30 ps – 1 ns	30 ps – 1 ns
AVG. OUTPUT POWER [UP TO] <sup>1</sup>	0.55 W	1.8 W	3.3 W	6 W
PULSE ENERGY [UP TO] <sup>1</sup>	40 μJ	100 μJ	200 μJ	400 μJ
PEAK POWER [UP TO] <sup>1</sup>	1.2 MW	3 MW	6 MW	12 MW
PULSE REPETITION RATE <sup>1</sup>	pulse-on-demand – 1 MHz			
SPECTRAL BANDWIDTH	< 1 nm			
BEAM QUALITY	M <sup>2</sup> < 1.2, TEM <sub>00</sub>			
PER	> 23 dB			
AMPLITUDE NOISE	< 4.0 % rms			
TIMING JITTER	< 3 ps			
LASER OUTPUT	Collimated free-space			
<b>ENVIRONMENTAL</b>				
WARM-UP TIME	< 15 minutes			
OPERATION TEMPERATURE	18 °C – 32 °C			
STORAGE TEMPERATURE	- 15 °C – 65 °C			
ON/OFF CYCLES	> 10000			
<b>MECHANICAL</b>				
SIZE LASER HEAD <sup>2</sup>	135 x 715 x 306 mm <sup>3</sup>			
WEIGHT LASER HEAD <sup>2</sup>	45 kg			
SIZE CONTROL UNIT	133 x 483 x 400 mm <sup>3</sup> (19"/3U rack mount)			
WEIGHT CONTROL UNIT	7 kg			
<b>ELECTRICAL</b>				
POWER SUPPLY	24 VDC / 25 A or 90 – 264 VAC, 47 – 63 Hz			
POWER CONSUMPTION	< 600 W			
<b>COOLING</b>				
LASER HEAD	water cooled			
LASER CONTROLLER	air cooled			

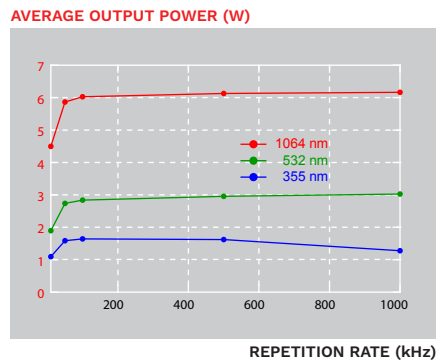
<sup>1</sup> Please inquire for possible combinations of pulse duration, average power and repetition rate  
<sup>2</sup> Exact size and weight depend on pulse repetition rate and wavelength



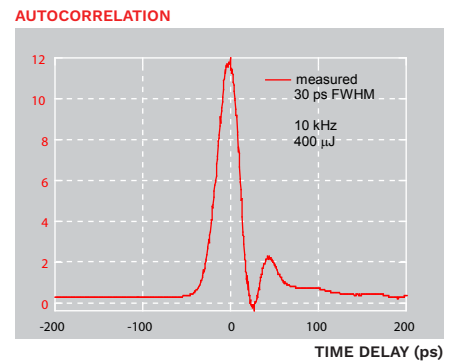
### PULSE ENERGY VS REPETITION RATE



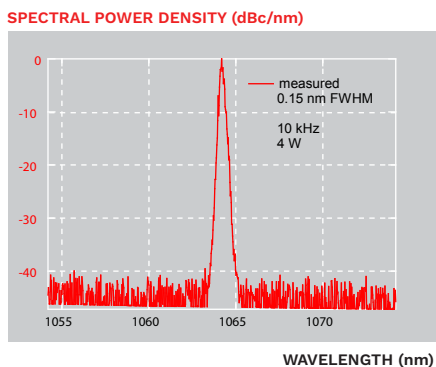
### AVERAGE OUTPUT POWER VS REPETITION RATE



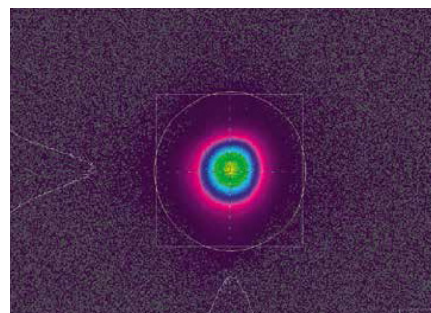
### PULSE PROFILE



### OPTICAL SPECTRUM



### BEAM PROFILE



Far-field beam profile at 10 kHz repetition rate and 400 μJ pulse energy