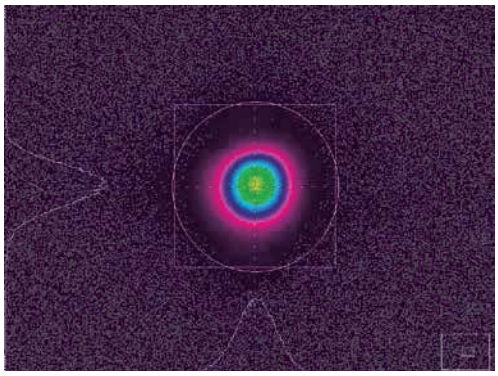
Katana XP

High energy versatile picosecond laser module

Swiss Made

The laser that can adapt and synchronize to any speed change

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.



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

Laser 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

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

Picosecond & Nanosecond Laser

Katana XP

Laser specifications	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)[1]	0.5 W	1.8 W	3.3 W	6 W
Pulse energy (up to)[1]	40 µJ	100 µJ	200 µJ	400 µJ
Peak power (up to)[1]	1.2 MW	3 MW	6 MW	12 MW
Pulse repetition rate[1]	pulse-on-demand – 1 MHz			
Spectral bandwidth	< 1 nm			
Beam quality	M^2 < 1.2, TEM_{00}			
PER	> 23 dB			
Amplitude noise (10 h)	< 4.0% rms			
Timing Jitter	> 3 ps			
Laser output	collimated free space			
Environmental				
Warm-up time	< 15 minutes			
Operation temperature	18 °C – 32 °C			
Storage temperature	-15 °C – 65 °C			
On/Off cycles	> 10000			
Mechanical				
Size laser head[2]	135 x 715 x 306 mm^3			
Weight laser head[2]	45 kg			
Size laser control unit	133 x 483 x 400 mm^3 (19"/3U rack mount)			
Weight laser control unit	7 kg			
Electrical				
Power supply	24 VDC / 25 A or 90 – 264 VAC, 47 – 63 Hz			
Power consumption	< 600 W			
Cooling				
Laser head	water cooled			
Laser controller	air cooled			

[1] Please inquire for possible combinations of pulse duration, average power and repetition rate
[2] Exact size and weight depend on pulse repetition rate and wavelength

RoHS compliant

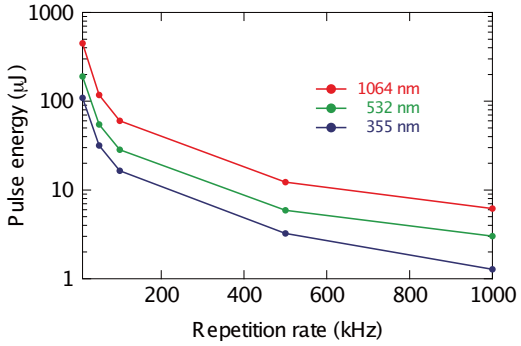
CE

DANGER
CLASS 4 LASER

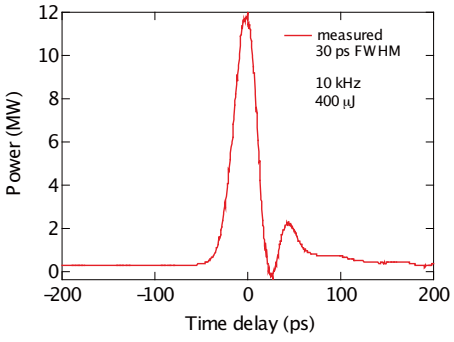
IEC Compliant Product
IEC 60068-2-27:2008
IEC 60068-2-6:2007
Shock & Vibration Test
IEC 60825-1:2014
Laser Radiation Safety

ISO Certified Company
ISO 9001:2008
ISO 13485:2012

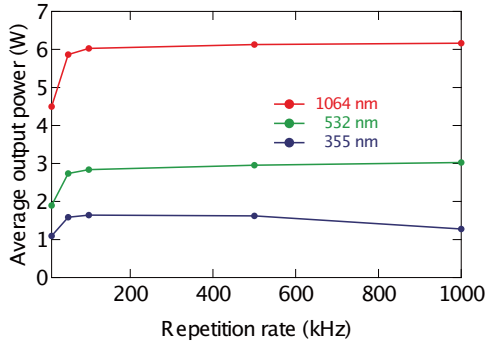
Pulse energy vs Repetition Rate



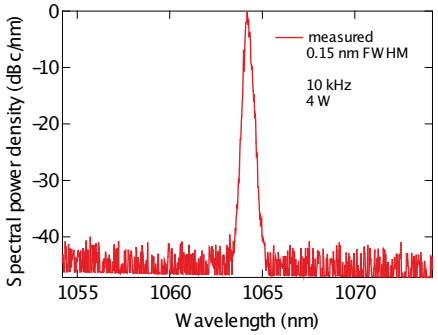
Pulse profile



Average output power vs Repetition Rate



Optical spectrum



Specifications subject to change without notice, March 2016

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