

High-Power Picosecond Laser

SESAM[®] Technology

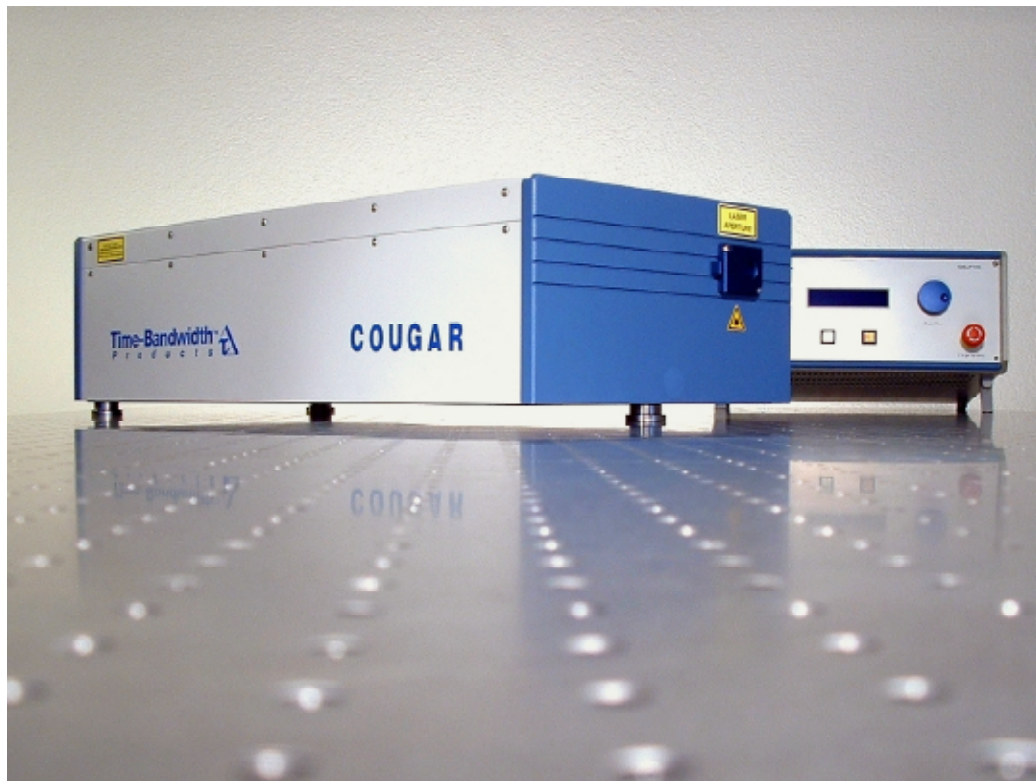
Customizable

Applications

- Multiphoton excitation
- Nonlinear processes
- Pump-probe experiments
- Time-resolved spectroscopy
- Seeding amplifiers
- Flow cytometry

Features

- Passively mode-locked DPSSL
- Low maintenance
- Customizable design
- Closed-loop water cooling
- Turn-key operation

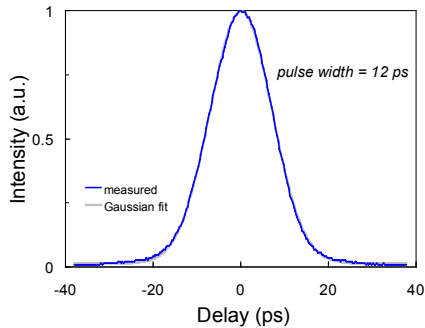


Options

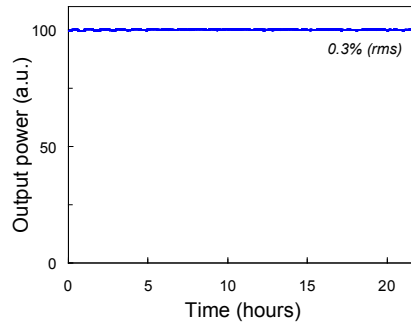
- Second, higher harmonic generation
- Extended pulse widths
- Clock synchronization
- Long-term power stabilization
- Multiple output beams
- Remote control
- RS-232

1064 nm, 532 nm, 355 nm	10 ps	pulse width
20 MHz – 400 MHz		wavelength
10 W @ 1064 nm		repetition rate
1%/°C		output power
TEM ₀₀		power stability
1.1		spatial mode
		M ²

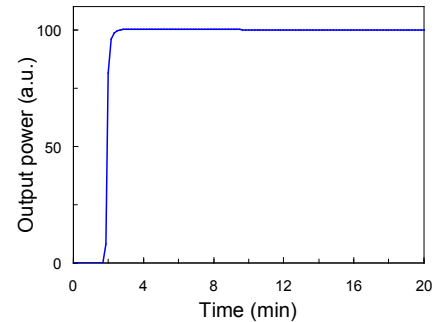
The COUGAR is a high average power, passively mode-locked, diode-pumped, solid-state laser system using Time-Bandwidth Products' patented SESAM® technology. The combination of the saturable absorber and longitudinal pumping yields a continuous train of clean picosecond pulses with exceptional amplitude and phase noise performance.



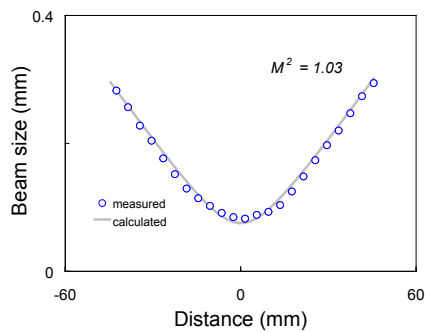
Typical autocorrelation trace of the COUGAR laser pulses



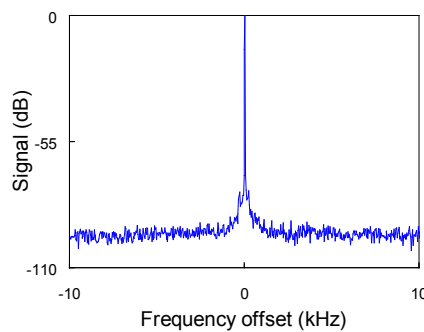
Average laser output power (long term)



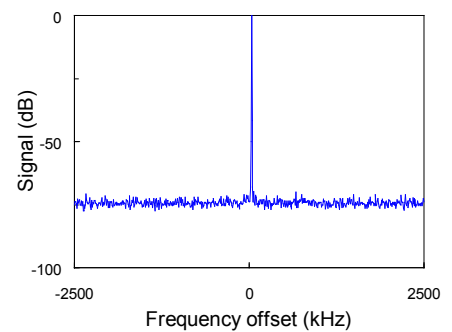
Average laser output power (long term)



Measured beam size versus propagation distance. The calculated curve shows the dependence for a Gaussian beam with the indicated M^2 value.



Typical microwave spectrum of the pulse train, centered at the laser repetition rate (span: 20kHz, resolution: 3Hz, vertical scale in dB)



Typical microwave spectrum of the pulse train, centered at the laser repetition rate (span: 5MHz, resolution: 1kHz, vertical scale in dB)

The COUGAR is a customizable, laboratory-style laser, allowing for options such as user-specified repetition rates ranging from 20 MHz to 400 MHz, increased pulse width, frequency conversion, or timing synchronization with the CLX-1100 phase-locked-loop feedback system. A turn-key system, COUGAR reaches its specified performance within seconds to minutes and requires very low maintenance.

Additional specifications	COUGAR (all models)
turn-on time	10 min
pointing stability	25 μ rad/°C
power stability (>1kHz)	0.1% rms
voltage	100VAC – 240VAC
frequency	50 Hz – 60Hz
input power (single phase)	1350 VA
laser head (size, weight)	310mm x 176mm x 632mm, 30kg
power supply (size, weight)	360mm x 160mm x 380mm, 15kg
chiller (size, weight)	220mm x 390mm x 280mm, 9.5kg



Does the COUGAR laser system match your requirements? Please let us know the specifications of the laser you are looking for. A superior technology and a strong team enable us to tailor our products to your special needs.

All specifications are subject to change without notice. All numbers given in this datasheet are typical values and may depend on the specific laser configuration. SESAM is a registered trademark in the following countries: USA, Switzerland, United Kingdom, Germany, Austria, Netherlands, Belgium, Luxembourg, France, Italy, Russia, China, Liechtenstein, Estonia, and Lithuania. This product is protected by one or several of the following patents: US6,538,298, US6,466,604

Technoparkstrasse 1
CH - 8005 Zürich
Switzerland
+41 (0)44 445 3120
info@tbwp.com
www.tbwp.com

Time-Bandwidth®
P r o d u c t s