CONQUEROR SERIES

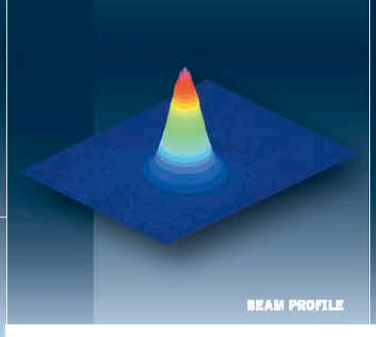
Beam sources and marking lasers

- High power q-switched lasers – have never been that small!
- up to 30 W, q-switched
- 30 W @ 1064nm
  25 W @ 532nm
  10 W @ 355nm
- 100kW pulse peak power
- 1Hz - 500kHz
- scanner-control + software already included
- entirely air-cooled
- up to 100,000 hours laser diode lifetime

COMPACT LASER SOLUTIONS

made in Germany

CONQUEROR SERIES


BEAM PROFILE


CONTROL UNIT


CONTROL UNIT

THE CONQUEROR - new products need new lasers!

When designing the CONQUEROR, we invented a unique, highly efficient resonator-architecture. Next to that we selected the latest state-of-the-art-technologies, enhanced and added them to this revolutionary new laser-concept. By minimizing the size of the whole lasersystem to an extreme and solely using air-cooling, we created the world's most compact laser of its kind.

The CONQUEROR creates an average q-switched power of up to 30 watts, offers a frequency range of 1Hz - 500kHz, an excellent TEM00 ($M^2 < 1.2$), pulses as short as 7ns and an energy of up to 1 mJ! The CONQUEROR's special resonator-design enables this unique laser to produce an enormous pulse peak power that is capable of creating a plasma in the air even at frequencies higher than 50kHz!

As a consequence of its ultra compact design, the CONQUEROR can virtually be integrated everywhere, even in environments such as gantry-systems, production lines, very small workstations and price-reasonable multi axis robot systems.

The CONQUEROR operates maintenance-free. Due to the high efficiency of the CONQUEROR as well as to the fact, that the laser diode is generally being operated well below its maximum rated output, we achive a laser diode lifetime of up to 100,000 hours.

The CONQUEROR is your choice, when a maximum versatility is required. In contrast to most of the conventional lasers including fibre-laser concepts the CONQUEROR series offers various unbeatable advantages to achive an extraordinary wide spectrum of applications. With the CONQUEROR you can even mark glass (including glass cutting and glass-inside marking!), diamonds, ceramics, gold, brass and copper in excellent quality. You can also use the CONQUEROR to drill, scribe, trimm, engrave, ablate, insulate, anneal, perforate and structure different materials, just to mention some applications.

Depending on your application, you can choose from different wavelengths (355nm, 532nm and 1064nm), different YAG- and YVO_4-models and different configurations. Next to our pulsed models we also offer a 532nm-CW-model (12W) that can be modulated up to 1MHz.

The CONQUEROR comes with our unique marking software. In addition, all CONQUEROR-beam sources already include the controls and drivers that are needed to upgrade the beam source to a full marking laser.

Combined with top-brand high speed scanheads and F-Theta lenses you get a laser system that is ready to serve you – just plug and play!

Technical Data

CONQUEROR

	YVO. UV 10	YVO. 532 25 VSP	YAG 532 3	YAG 532 1	YAG IR 3	YVO. IR 30	CW 15
mode of operation	pulsed	pulsed	pulsed	pulsed	pulsed	pulsed	CW
power class	10 W	25 W	3 W	1 W	3 W	30 W	15 W
wavelength	355 nm	532 nm	532 nm	532 nm	1064 nm	1064 nm	532 nm
beam mode	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}
M^2	< 1.3	< 1.2	< 1.3	< 1.2	< 1.3	< 1.3	< 1.1
polarisation	linear > 100:1						
max pulse energy	400 µJ	500 µJ	400 µJ	400 µJ	650 µJ	750 µJ	
minimal pulse width	7 ns	7 ns	7 ns	7 ns	7 ns	10 ns	
repetition rate	1 Hz - 500 kHz	1 Hz - 500 kHz	1 Hz - 50 kHz	1 Hz - 50 kHz	1 Hz - 50 kHz	1 Hz - 500 kHz	
average outputpower	10 W @ 50 kHz	25 W @ 50 kHz (12 ns)	3 W @ 10 kHz	1 W @ 6 kHz	3 W @ 10 kHz	30 W @ 100 kHz	
laser class	4	4	4	4	4	4	4
cooling	entirely air cooled						
cooling system	thermo electric cooling						
electrical ratings	24 V DC						

We reserve the right to make technical modifications without prior notice. Errors and omissions excepted. 10% tolerances for measured values.

optional:
ultra small control unit

Compact Laser Solutions GmbH · Kelchstr. 21 · D-12169 Berlin · Tel. +49/30/23 555 40 · Fax +49/30/23 555 445
E-mail: info@compactlaser.de · www.compactlaser.com

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