

CONQUEROR^{SERIES}

14w – 532nm – q-switched – has never been that small!*



made in Germany

modular system:

OEM-beamsources and
lasermarkers

532nm- and 1064nm-models

YAG- and YVO-models

pulsed models and CW-models

* CONQUEROR 532_14VSP

14 W @ 50 kHz (12 ns)

diffraction limited ($M^2 < 1.2$)

highest efficiency in it's class

up to 450 μ J energy per pulse @ 7 ns

1 Hz - 500 kHz

high repetition rates / single shot operation

entirely air-cooled

up to 100.000 hours laser-diode-lifetime



ultra small control unit

532nm - LASERMARKER



OEM - LASER SOURCE



1064nm - LASERMARKER



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 them 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 it's kind.

The CONQUEROR* creates an average q-switched power of up to 14 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 450μJ! The CONQUERORs 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 20kHz!

As a consequence of it's ultra compact design, the CONQUEROR can virtually be integrated everywhere, even in environments such as gantry-systems, production-lines and very small workstations.

All CONQUERORs operate 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 it's maximum rated output, we achieve 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 achieve an extraordinary wide spectrum of applications. With the CONQUEROR* you can even mark glass (including glass cutting and in-glass-engraving!), 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 (532nm and 1064nm), different YAG- and YVO-models and different configurations. Next to our pulsed models we also offer a 532nm-CW-model (12W), that can be modulated up to 1MHz.

All CONQUERORs come with our unique marking software. Next to that all CONQUEROR-beamsources already include all the controls and drivers that are needed to upgrade the beamsource to a full lasermarker.

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

* CONQUEROR 532_14VSP

Technical Data

CONQUEROR-series

	YAG 532_1	YAG 532_3	YVO ₄ 532_14VSP	YAG IR_3	YVO ₄ IR_3.5	CW_12
mode of operation	pulsed	pulsed	pulsed	pulsed	pulsed	CW
power class	1 W	3 W	14 W	3 W	3.5 W	12 W
wavelength	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
M ²	< 1.2	< 1.3	< 1.2	< 1.3	< 1.3	< 1.1
polarisation	linear > 100:1					
max pulse energy	400 μJ	400 μJ	450 μJ	650 μJ	250 μJ	
minimal pulse width	7 ns	7 ns	7 ns	7 ns	7 ns	
repetition rate	1 Hz - 50 kHz	1 Hz - 50 kHz	1 Hz - 500 kHz	1 Hz - 50 kHz	1 Hz - 100 kHz	
average outputpower	1 W @ 6 kHz	1 W @ 6 kHz	14 W @ 50 kHz (12 ns)	3 W @ 10 kHz	3 W @ 100 kHz	
laser class	4	4	4	4	4	4
cooling	entirely air cooled					
cooling system	thermo electric cooling					
electrical ratings	24 VDC					
power consumption	< 200 W	< 200 W	< 200 W	< 200 W	< 200 W	< 200 W
dimensions laser head	181mm x 75mm x 43mm	181mm x 75mm x 43mm	181mm x 75mm x 43mm	181mm x 75mm x 43mm	181mm x 75mm x 43mm	181mm x 75mm x 43mm
weight laser head	~ 2 kg	~ 2 kg	~ 2 kg	~ 2 kg	~ 2 kg	~ 2 kg
dimensions control unit	150mm x 150mm x 153mm	150mm x 150mm x 153mm	150mm x 150mm x 153mm	150mm x 150mm x 153mm	150mm x 150mm x 153mm	150mm x 150mm x 153mm
weight control unit	~ 4 kg	~ 4 kg	~ 4 kg	~ 4 kg	~ 4 kg	~ 4 kg

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