

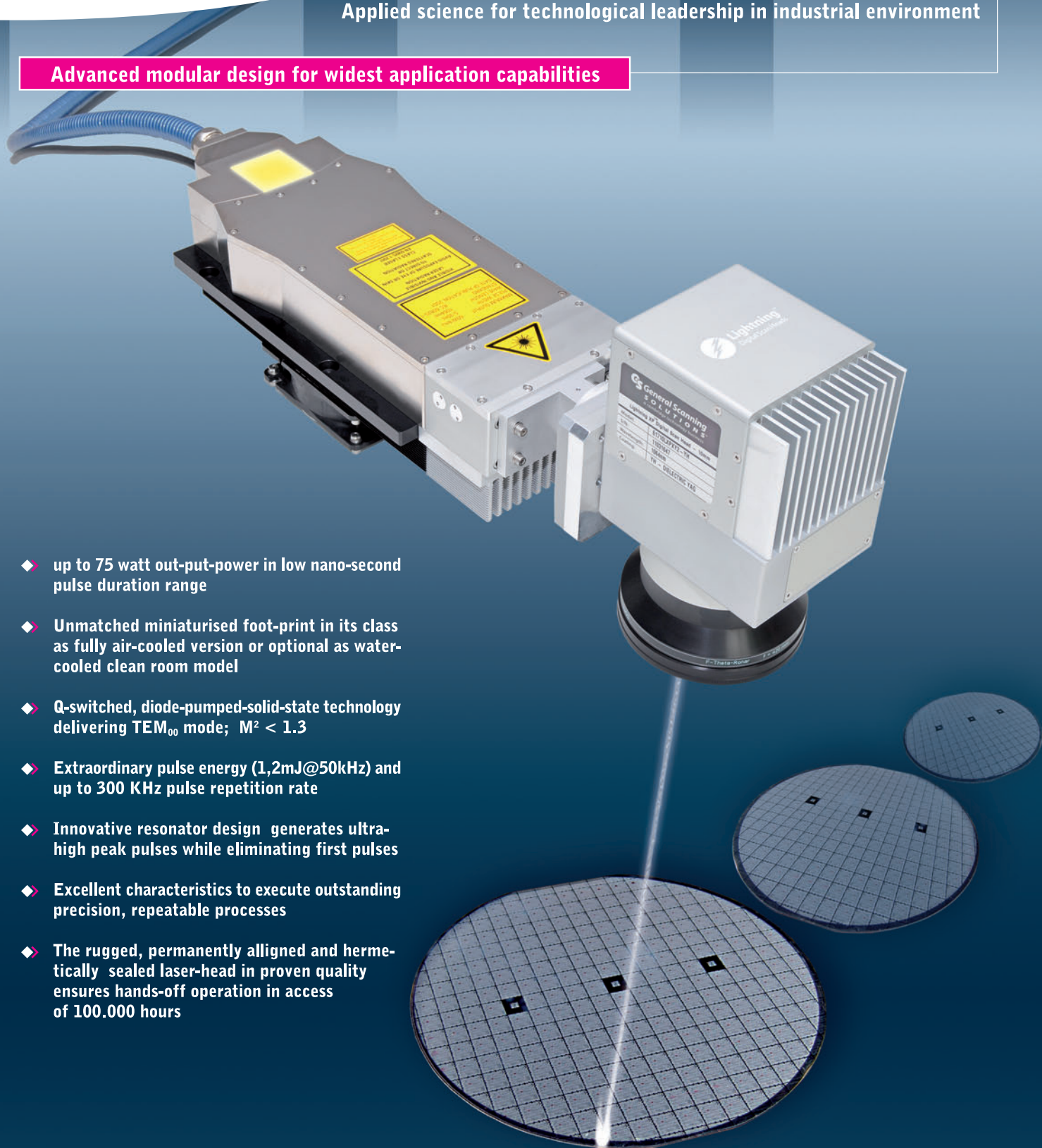
The multifunctional laser system for marking and material processing

BLADE¹⁰⁶⁴

Ultimate IR Laser Power

Applied science for technological leadership in industrial environment

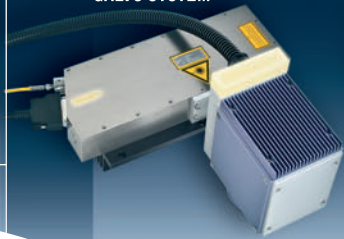
Advanced modular design for widest application capabilities



- ◆ up to 75 watt out-put-power in low nano-second pulse duration range
- ◆ Unmatched miniaturised foot-print in its class as fully air-cooled version or optional as water-cooled clean room model
- ◆ Q-switched, diode-pumped-solid-state technology delivering TEM₀₀ mode; M² < 1.3
- ◆ Extraordinary pulse energy (1,2mJ@50kHz) and up to 300 KHz pulse repetition rate
- ◆ Innovative resonator design generates ultra-high peak pulses while eliminating first pulses
- ◆ Excellent characteristics to execute outstanding precision, repeatable processes
- ◆ The rugged, permanently aligned and hermetically sealed laser-head in proven quality ensures hands-off operation in access of 100.000 hours

Innovative. Powerful. Reliable.

HIGH - RESOLUTION
GALVO SYSTEM



OEM -
LASER SOURCE



HIGH SPEED
GALVO SYSTEM



BLADE¹⁰⁶⁴

The BLADE-series stands for powerful laser processing without compromises. No matter what kind of application has to be handled: marking, scribing, cutting, engraving and even deep-engraving into all different kinds of materials will result in an overall convincing finish. With the BLADE series you work on glass, diamonds, ceramic, gold, copper, brass, plastics and synthetic compounds, just to mention some materials.

The BLADE series is your choice, when a maximum versatility is required. In contrast to most of the conventional lasers including fibre-laser-concepts the BLADE series offers various unbeatable advantages to achieve an extraordinary wide spectrum of applications.

Thanks to the innovative resonator design, the BLADE series generates an ultra-high peak pulse output while eliminating first pulses. This characteristic combined with the exceptional beam-quality and its very short pulse width suits perfectly for surface-ablation and –structuring, micro-drilling and enables you to achieve excellent quality.

The BLADE series features impressing pulse repetition frequencies of up to 300 kHz! Its unique modulation design enables you to modulate the laser-beam from single-shot to maximum pulse repetition rates without affecting the focal distance and the spot shape.

When comparing the BLADE series to common lasers including fibre-laser-concepts you will see and feel the difference: Besides the fact that our systems are usually a lot smaller (Compact Laser Solutions is not just our name – compactness is our mission), you will easily notice with how much passion and accuracy our lasers are built in a proven quality.

The BLADE laser systems can be easily integrated and interfaced into high-through-put production lines as well as installed in class 1 laser safety workstations.

Due to the fact, that the laser diodes in our systems are generally operated well below their maximum rated output, we achieve a diode lifetime of more than 100.000 hours. This fact results in lowest cost of ownership. If a diode change should one day be necessary, this is not a problem at all: The convenient configuration of the laser diode inside the power-supply enables you to easily exchange the diode without affecting the laser head.

Discover fascinating new opportunities with a fantastic lasersystem **made in Germany.**

Technical Data

BLADE - IR Series (infrared spectrum)

	YVO. IR_10	YVO. IR_15	YVO. IR_25	YVO. IR_40	YVO. IR_75	YVO. IR_18SP
Laser Class	4	4	4	4	4	4
Mode of Operation	Pulsed	Pulsed	Pulsed	Pulsed	Pulsed	Pulsed
CW-Mode Outputpower [W]	10	15	25	40	75	18
Average Outputpower [W]						
Wavelength [nm]	1064	1064	1064	1064	1064	1064
Beam-Mode	TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀
M ²	<1.3	<1.3	<1.3	<1.3	<1.3	<1.2
Polarisation	Linear 100:1					
Pulse Energy		1.2mJ@1kHz 0.85mJ@10kHz 0.6mJ@20kHz	2mJ@1kHz 1mJ@10kHz 0.8mJ@20kHz	1mJ@30kHz	1.2mJ@50kHz	0.18mJ@100kHz
Minimal Pulse Width	ca. 15ns	ca. 15ns	ca. 15ns	ca. 15ns	ca. 15ns	45ns@100kHz 13ns@30kHz
Repetition Rate	1Hz-200kHz	1Hz-200kHz	1Hz-200kHz	20kHz-300kHz optional 1Hz-200kHz	40kHz-300kHz optional 1Hz-200kHz	15kHz-200kHz optional 1Hz-200kHz
Cooling	Entirely Air-Cooled					
Cooling System	Thermo Electric Cooling					
Electrical Ratings	110V / 230 VAC					
Typical Power Consumption	max. 700W / typ. 380W	max. 700W / typ. 380W	max. 700W / typ. 380W	max. 1.5kW / typ. 1.2kW	max. 1.7kW / typ. 1.2kW	max. 700W / typ. 380W
Laser Head (WxHxD)	180mm x 180mm x 50.5mm (with cooling fan)	180mm x 180mm x 50.5mm (with cooling fan)	325mm x 160mm x 134mm (with cooling fan)	401mm x 160mm x 130mm (with cooling fan)	401mm x 160mm x 130mm (with cooling fan)	325mm x 160mm x 134mm (with cooling fan)
Weight Laser Head	6kg	6kg	6.5kg	9kg	9kg	6.5kg
Control Unit (WxHxD)	350mm x 350mm x 140mm	350mm x 350mm x 140mm	350mm x 350mm x 140mm	475mm x 175mm x 350mm	475mm x 175mm x 350mm	350mm x 350mm x 140mm
Weight Control Unit	16kg	16kg	16kg	23kg	23kg	16kg

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