

MONOLITH Series

Beam sources and marking lasers

STATE-OF-THE-ART DIODE-PUMPED Q-SWITCHED, SOLID STATE LASER
EXTRAORDINARY WALL-PLUG EFFICIENCY COMBINED WITH WORLD-WIDE
SMALLEST FOOTPRINT OF ITS KIND
ALL COMPONENTS, LASER HEAD, POWER SUPPLY AND CONTROLLER, ARE
INTEGRATED INTO ONE ROBUST, COMPACT UNIT
ULTRA-COMPACT Q-SWITCH OEM-LASER SOURCES FOR MATERIAL MACHINING
AND MARKING APPLICATIONS

CORE



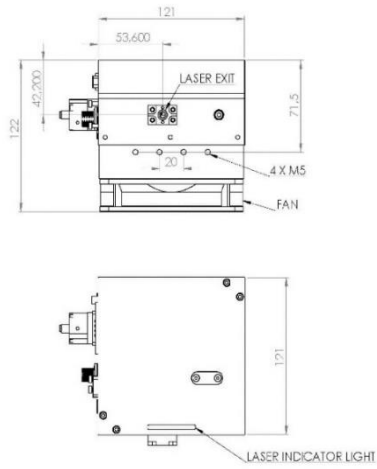
- Average Power: 16W for 1064nm, 12W for 532nm, 6W for 355nm, 2W for 266nm
- Short laser pulse width: 4 to 10ns
- High single pulse energy: e.g. 500μJ at 355nm and 6kHz
- Significant single pulse peak power: up to 100kW
- Arbitrary repetition rate: 1Hz to 500kHz
- Multiple Pulse Control (MPS) function
- THG-shifter implemented (355nm version)
- FHG-shifter implemented (266nm version)
- Integrated safety shutter (optional)
- Integrated laser indicator light
- Up to 100.000 hours laser-diode-lifetime
- Air-cooling, water-cooling also available for e.g. clean-room processing
- Also available as complete marking system with software package
- Made in Berlin, Germany

	Deep UV		UV				
Model	266_1	266_2	355_1_HF	355_1_HE	355_3_HF	355_3_HE	355_6_HF
Betriebsart Mode of operation	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed
Leistungsklasse power class	1W	2W	1W	1W	3W	3W	6W
Wellenlänge Wavelength	266nm	266nm	355nm	355nm	355nm	355nm	355nm
Strahlqualität Beammode	TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₁	TEM ₀₀	TEM ₀₀
M ²	< 1.5	< 1.5	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
Polarisation	Linear > 100:1 vertical						
Strahldurchmesser Beam diameter	~0,8mm	~0,8mm	~0,8mm	~0,8mm	~0,8mm	~0,8mm	~0,8mm
max. Pulsenergie max pulse energy	~280µJ	~350µJ	~80µJ	~350µJ	~150µJ	~500µJ	~180µJ
minimalste Pulsweite minimal Pulse width	<7ns	<7ns	4ns	12ns	8ns	12ns	8ns
Repetitionsrate Repetition rate	1Hz-100kHz	1Hz - 100kHz	1Hz - 500kHz	1Hz - 100kHz	1Hz - 500kHz	1Hz - 100kHz	1Hz - 500kHz
mittlere Leistung average output power	1W@10kHz	2W@10kHz	1W@40kHz	1W@5kHz	3W@40kHz	3W@5kHz	6W@40kHz
max. Pulsspitzenleistung max. peak pulse power	40KW	50KW	20KW	30KW	20KW	40KW	20KW
Laserklasse laser class	4						
Kühlung cooling	ausschließlich Luftkühlung oder optional Wasserkühlung entirely air-cooled or optional water-cooled						
Kühlungssystem cooling system	Thermo elektrische Kühlung thermo electric cooling						
Elektrischer Anschluss electrical ratings	24 VDC						
Leistungsaufnahme power consumption	< 300W						
Abmessungen Laserkopf dimensions laser head	122mm x 122mm x 122mm						
Gewicht Laserkopf weight laser head	~3kg						

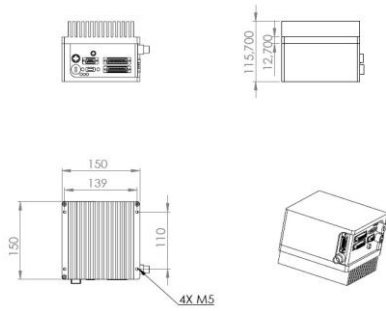
	Green					
Model	532_3_HF	532_3_HE	532_8_HF	532_8_HE	532_12_HF	532_15_CW
Betriebsart Mode of operation	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed	CW
Leistungsklasse power class	3W	3W	8W	8W	12W	15W
Wellenlänge Wavelength	532nm	532nm	532nm	532nm	532nm	532nm
Strahlqualität 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	< 1.3
Polarisation	Linear > 100:1 horizontal					
Strahldurchmesser Beam diameter	~0,8mm	~0,8mm	~0,8mm	~0,8mm	~0,8mm	~0,8mm
max. Pulsenergie max pulse energy	~200 µJ	~550 µJ	~350 µJ	~550 µJ	~350 µJ	
minimalste Pulsweite minimal Pulse width	8ns	9ns	9ns	12ns	9ns	
Repetitionsrate Repetition rate	1Hz - 500kHz	1Hz - 100kHz	1Hz - 500kHz	1Hz - 100kHz	1Hz - 500kHz	
mittlere Leistung average output power	3W@40kHz	3W@6kHz	8W@49kHz	8W@12kHz	12W@60kHz	
max. Pulsspitzenleistung max. peak pulse power	25KW	60KW	40KW	45KW	40KW	
Laserklasse laser class	4					
Kühlung cooling	ausschließlich Luftkühlung oder optional Wasserkühlung entirely air-cooled or optional water-cooled					
Kühlungssystem cooling system	Thermo elektrische Kühlung thermo electric cooling					
Elektrischer Anschluss electrical ratings	24 VDC					
Leistungsaufnahme power consumption	< 300W					
Abmessungen Laserkopf dimensions laser head	122mm x 122mm x 122mm					
Gewicht Laserkopf weight laser head	~3kg					

	Infrared				
Model	1064_6_HF	1064_6_HE	1064_10_HF	1064_10_HE	1064_16_HF
Betriebsart Mode of operation	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed	gepulst / pulsed
Leistungsklasse power class	6W	6W	10W	10W	16W
Wellenlänge Wavelength	1064nm	1064nm	1064nm	1064nm	1064nm
Strahlqualität Beammode	TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀	TEM ₀₀
M ²	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
Polarisation	Linear > 100:1 vertical				
Strahldurchmesser Beam diameter	~0,8mm	~0,8mm	~0,8mm	~0,8mm	~0,8mm
max. Pulsenergie max pulse energy	~350 µJ	~700 µJ	~350 µJ	~700 µJ	~350 µJ
minimalste Pulsweite minimal Pulse width	10ns	8ns	10ns	12ns	10ns
Repetitionsrate Repetition rate	1Hz - 500kHz	1Hz - 100kHz	1Hz - 500kHz	1Hz - 100kHz	1Hz - 500kHz
mittlere Leistung average output power	6W@50kHz	6W@50kHz	10W@50kHz	10W@50kHz	16W@60kHz
max. Pulsspitzenleistung max. peak pulse power	35KW	90KW	35KW	100KW	35KW
Laserklasse laser class	4				
Kühlung cooling	ausschließlich Luftkühlung oder optional Wasserkühlung entirely air-cooled or optional water-cooled				
Kühlungssystem cooling system	Thermo elektrische Kühlung thermo electric cooling				
Elektrischer Anschluss electrical ratings	24 VDC				
Leistungsaufnahme power consumption	< 300W				
Abmessungen Laserkopf dimensions laser head	122mm x 122mm x 122mm				
Gewicht Laserkopf weight laser head	~3kg				

MONOLITH CORE beam source



Ultra-compact control unit



Standard control unit

