

SolidMe

Customizable DPSS Laser For Industrial and Research Applications



Controlable and Adaptable



Cost-effective



Low Maintenance



Stand-alone or Full Remote Control



Modular



DPSS laser comprising all in-house manufactured components and offering a wide range of adaptations and customizability.

Master oscillator is an end-pumped, q-switched laser that can be operated from 10 Hz – 20 kHz with the following primary options:

- Up to 2 amplifier modules to reach average power of 45 W
- One amplifier and Second Harmonic Generation stage
- Second and Third Harmonic Generation stage
- Remote wavelength selection (FUN, SHG, THG)
- Fiber coupling



NO SMILE
EFFECT



MACRO
CHANNELS



EXTENDED
LIFE-TIME



HIGH
BRIGHTNESS



COOLING
EFFICIENCY



MECHANICAL
STRESS FREE

monocrom 

High-Level Specifications

Typical applications:

- Ablation
- LiDAR
- Material processing
- PIV
- Combustion
- CARS
- Diamond cutting and engraving
- Remote sensing
- Resistor trimming
- Photochemistry
- Bio-medical pump-probe experiments
- Metrology
- LIBS

	Diode Pumped Solid State Laser				
Type	Diode Pumped Solid State Laser				
Configuration	MO1PA-SHG-CW	MO1PA-THG	MO-WL-select	MO1PA-SHG	MO2PA
Repetition Rate [kHz]	CW	1 – 5 (up to 20)			
Wavelength [nm]	532	355	355 / 532 / 1064	532	1064
Wavelength Tolerance [nm]	±0.5				
Average Output Power [W]	up to 10	up to 1	0.5 / 2.0 / 5	up to 15	up to 45
Power Adjustment Range [%]	30 – 100				
Pulse Energy [mJ]	n.a.	0.5	0.2 / 0.2 / 1	up to 5	up to 20
Pulse Width, FWHM [ns]	CW	35 – 50	35 – 65	35 – 65	50 – 100
Beam Quality, FUN [M ²]	1.5 – 1.7				
Beam Divergence, FUN [mrad]	< 1.0				
Beam diameter, 1/e ² [mm]	2 – 3				
Power Stability	< 1% @ 8 h				
Pulse to Pulse Stability	< 1% rms				
Pump diode life-time	20,000 h				
Colling solution	chiller (optional)				
Coolant	90% DI water – 10% entylenglycol				
Coolant Flow [l/min]	< 3.5				
Coolant Inlet Pressure [bar]	3 – 4				
Coolant Temperature [°C]	20 – 25				

Full subassembly:

- Laser Driver & Power Supply
- Chiller (optional)
- ADC Card for LabView (optional)

