

MCC Series 750ps Microchip Laser



Applications

- Seed laser
- Micromachining
- Pump source for optical parametric oscillators
- Laser-induced breakdown spectroscopy (LIBS)
- Laser-based ultrasound detection
- Laser ionization mass spectroscopy (LIMS)
- Laser ranging
- Laser-induced fluorescence (LIF)
- Laser ultrasonic imaging
- Laser ablation
- Nonlinear optical measurement

Key Features

- ◆ Single pulse energy up to 120μJ
- ◆ Repetition rate up to 10kHz
- ◆ Spatial mode TEM₀₀
- ◆ Polarization-stable
- ◆ A wide range of wavelengths

Technical Specifications

Optical Parameters													
Wavelength (nm)	1064			532			355			266			213
Repetition rate (kHz)	1	5	10	1	5	10	1*	5*	10*	1*	5*	10*	1*
Average power (mW)	100	300	300	50	150	150	20	50	50	10	40	40	4
Pulse energy (μJ)	100	60	30	50	30	15	20	10	5	10	8	4	4
Pulse width (ps)	750			750			650			650			650
Power stability (8h)	±3%												
Beam profile	TEM ₀₀												
Beam full divergence (typ., mrad)	Horizontal @1/e ²	8	12	7	10	5	8	5	8	5	8	5	5
	Vertical @1/e ²	8	12	7	10	5	8	5	8	5	8	5	5
Polarization ratio	>100:1												
System Parameters													
Supply power voltage	100-240 VAC, 50/60 Hz												
Control interface	RS232, USB												
Power consumption (W)	≤25	≤20	≤30	≤25	≤30	≤35	≤25	≤25	≤30	≤25	≤30	≤30	≤25
Power dimensions (W×H×L,mm)	168×88×140												
Laser dimensions (W×H×L,mm)	45×33×120												
Operation temperature (°C)	15~35												
Storage temperature (°C)	0~60												

1. *Side laser outlet configuration (middle laser outlet configuration unless otherwise stated)

Lasers with repetition rate < 20kHz are positive-edge-triggered, and lasers with repetition rate > 20kHz are gate-triggered. All systems rely on 5V TTL levels and have SMA interfaces for external triggering input. See mechanical specifications for more details!

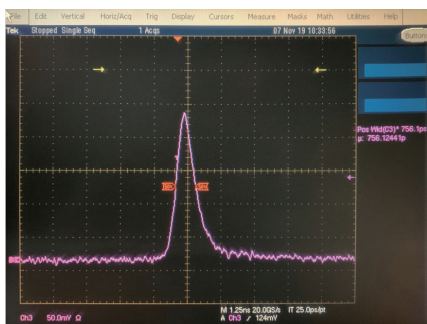
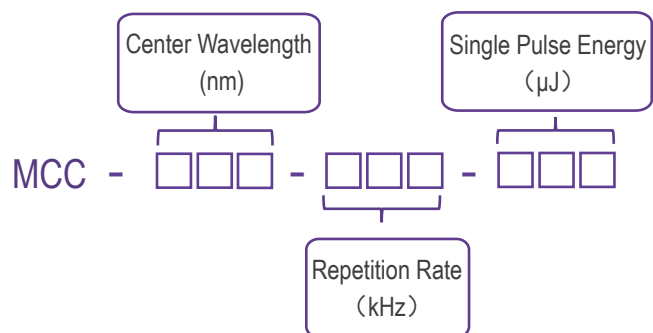
2. Built-in beam expander and collimator are available upon request, and divergence can be less than 2mrad.

3. All the data in the above table are the typical values obtained from the tests at room temperature of 25°C, and the final data is subject to the final test report.

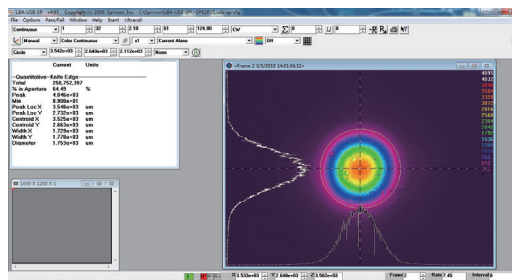
Order Information

Wavelength (nm)	Part Number	Repetition rate (kHz)	Pulse energy (μJ)
1064	MCC-1064-1-100	1	100
	MCC-1064-5-60	5	60
	MCC-1064-10-30	10	30
532	MCC-532-1-50	1	50
	MCC-532-5-30	5	30
	MCC-532-10-15	10	15
355	MCC-355-1-20	1	20
	MCC-355-5-10	5	10
	MCC-355-10-5	10	5
266	MCC-266-1-10	1	10
	MCC-266-5-8	5	8
	MCC-266-10-4	10	4
213	MCC-213-1-4	1	4

Part Numbering Schema

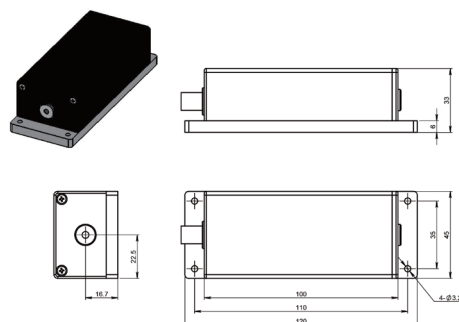
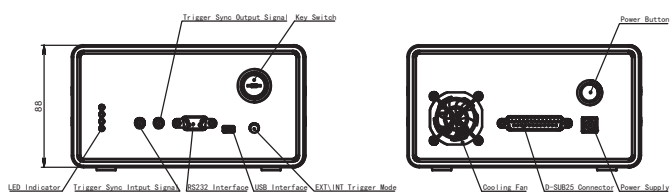


Typical Pulse

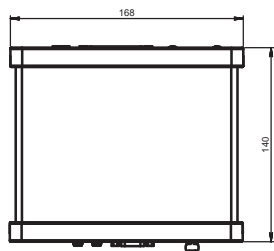


Beam Profile

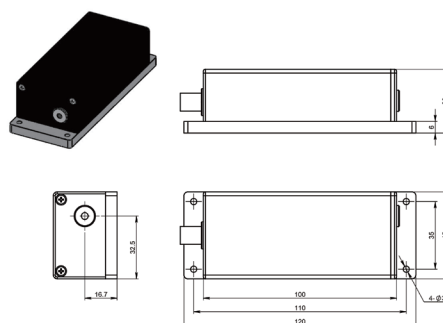
Mechanical Drawings (in mm)



Laser Head (middle laser outlet)



Power Supply



Laser Head (side laser outlet)

