

MCJ Series 1ns Microchip Laser



Applications

Material micromachining
Spectrum analysis
LIDAR
Pump source
Biomedicine

Key Features

- ◆ Pulse width down to 1ns
- ◆ Single pulse energy up to 100μJ
- ◆ Repetition rate up to 2kHz
- ◆ Spatial mode TEM₀₀

Technical Specifications

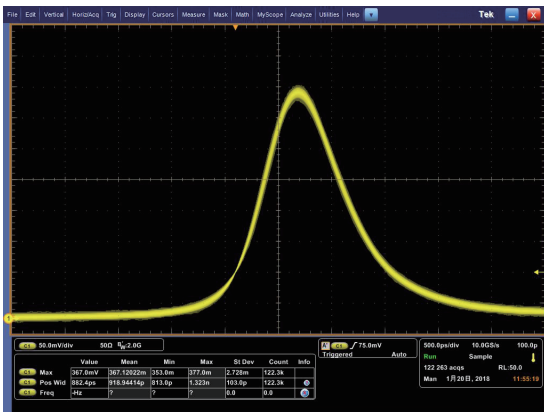
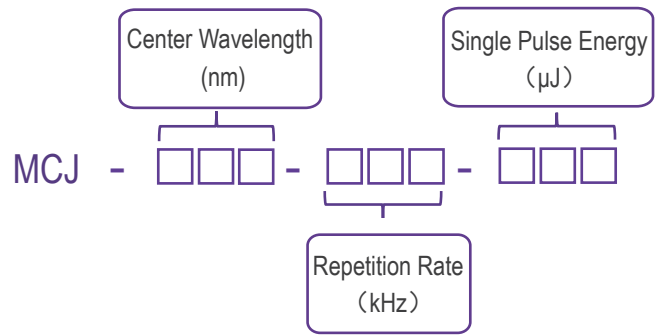
Optical Parameters					
Wavelength (nm)	1030	515	343	257	
Repetition rate (kHz)	1	1	1*	1*	
Average power (mW)	100	40	20	8	
Pulse energy (μJ)	100	40	20	8	
Pulse width (ps)	1000	900	800	800	
Power stability (8h)	±3%				
Beam profile	TEM ₀₀				
Beam full divergence (typ., mrad)	Horizontal @1/e ²	6	4	3	2
	Vertical @1/e ²	6	4	3	2
Polarization ratio	>100:1				
System Parameters					
Supply power voltage	100-240 VAC, 50/60 Hz				
Control interface	RS232, USB				
Power consumption (W)	≤15	≤15	≤15	≤15	
Power dimensions (W×H×L, mm)	168×88×140				
Laser head dimensions (W×H×L, mm)	45×33×120				
Operation temperature (°C)	15-35				
Storage temperature (°C)	0-60				

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

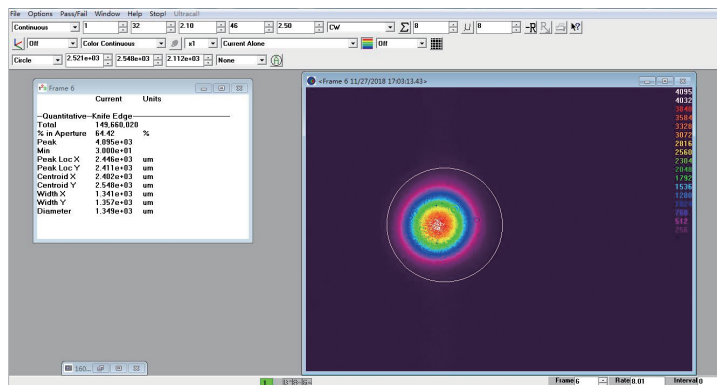
Order Information

Wavelength (nm)	Part Number	Repetition rate (kHz)	Pulse energy (μJ)
1030	MCJ-1030-1-100	1	100
515	MCJ-515-1-040	1	40
343	MCJ-343-1-020	1	20
257	MCJ-257-1-008	1	8

Part Numbering Schema

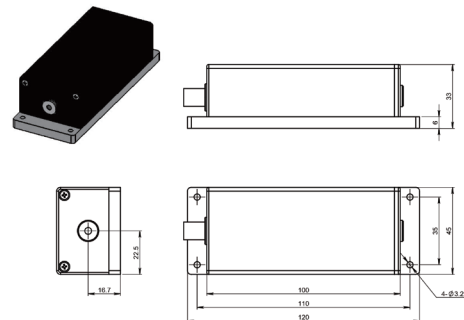
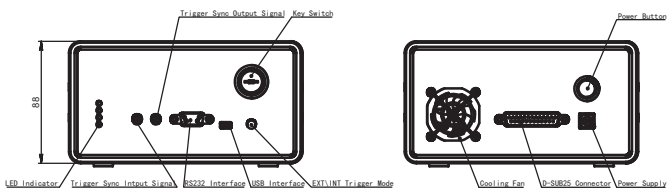


Typical Pulse

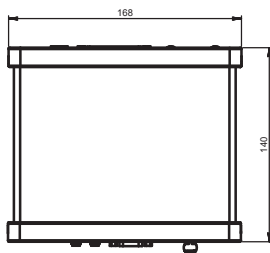


Beam Profile

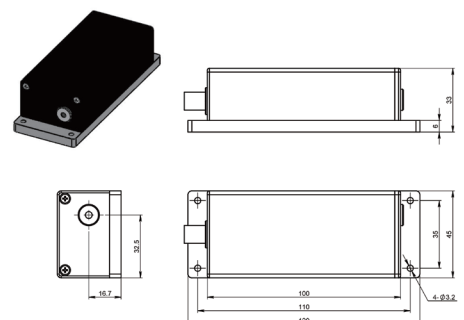
Mechanical Drawings (in mm)



Laser Head (middle laser outlet)



Power Supply



Laser Head (side laser outlet)

