

# 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 TEM<sub>00</sub>

## 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 <sub>00</sub>				
Beam full divergence (typ., mrad)	Horizontal @1/e <sup>2</sup>	6	4	3	2
	Vertical @1/e <sup>2</sup>	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				

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!

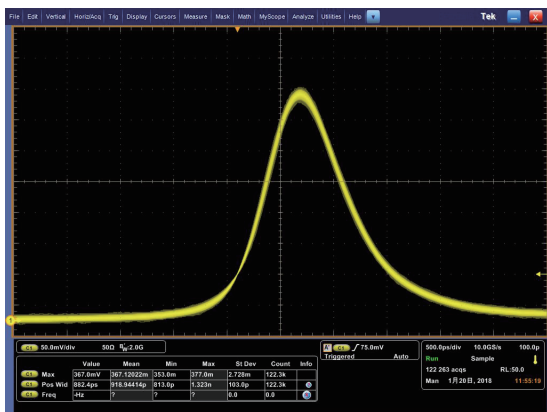
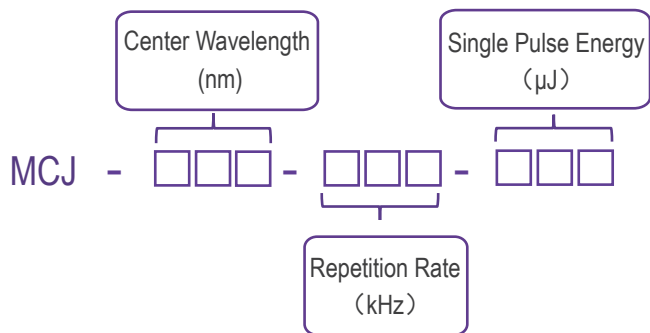
2. Built-in beam expander and collimator are available upon request, and divergence can be less than 2mrad.

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.

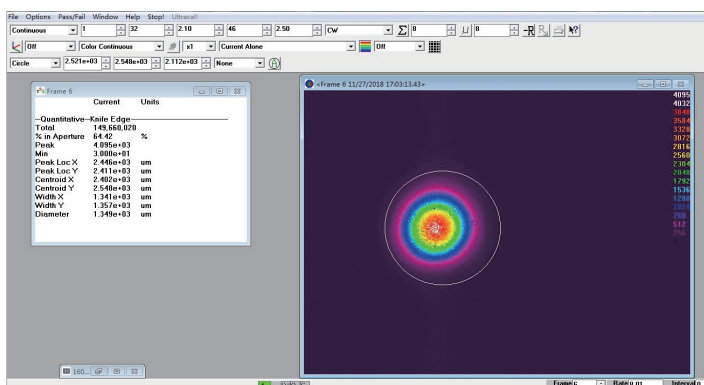
## Order Information

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

## Part Numbering Schema

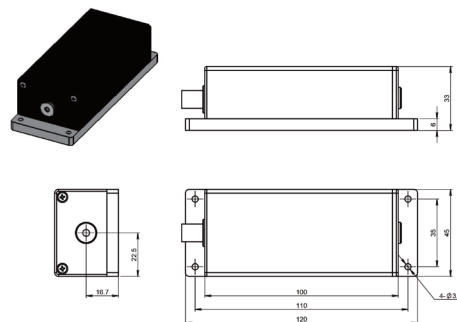
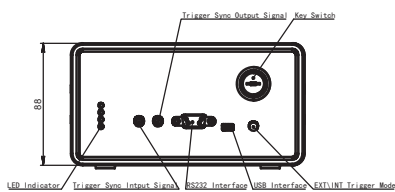


Typical Pulse

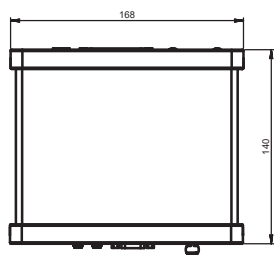


Beam Profile

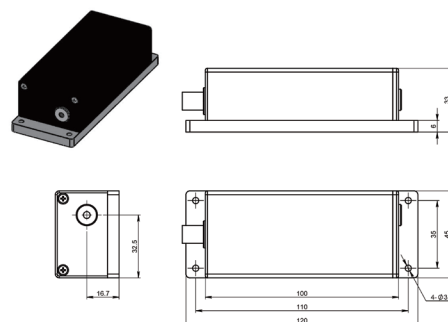
## Mechanical Drawings (in mm)



Laser Head (middle laser outlet)



Power Supply



Laser Head (side laser outlet)

