



MCO Series Energy Adjustable Free Space Microchip Laser



The MCO series energy adjustable sub-nanosecond microchip laser with free space output, is composed of integrated electronic control module for energy adjustment, photodetector module and laser drive board. This laser features compact design, plug and play, and free space output with a beam divergence lower than 2mrad.

Applications

- Laser engraving
- Laser-induced breakdown spectroscopy (LIBS)
- Laser photoluminescence
- Laser marking
- Laser capture microdissection
- Laser-induced fluorescence (LIF)
- Laser mass spectroscopy
- Ultraviolet microscopy
- Raman spectroscopy
- LiADR
- Thin film scribing and processing
- Semiconductor inspection
- Photoacoustic imaging
- Laser spark plug
- Laser remote sensing

Key Features

- ◆ Pulse width < 1ns
- ◆ Repetition rate variable from 1-200Hz
- ◆ Energy adjustable by PC control
- ◆ Photodiode output signal with time jitter < 100ps
- ◆ Sealed package, high reliability
- ◆ Plug and play, include PC control software

Technical Specifications

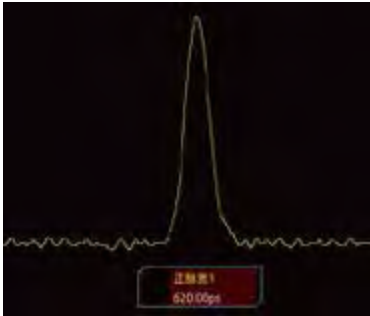
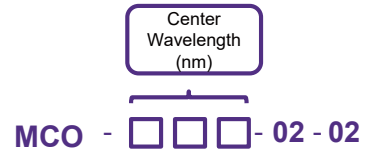
Optical Parameters				
Wavelength (nm)	1064	532	355	266
Repetition rate (Hz)	1-200			
Max. energy @ Free space output (µJ)	60	30	25	15
Pulse width (ns)	≤1			
Energy stability (RMS)	≤3%			
Adjusting precision of output energy	≤2%			
Beam profile (Free space output)	TEM ₀₀			
Full angle divergence Typ. (mrad)	Horizontal @1/e ²	≤2		
	Vertical @1/e ²	≤2		
Polarization	≥100:1			
System Parameters				
Supply power voltage	24V DC			
Modulation input	TTL 0-5V, SMB input			
Control interface	RS-232			
Peak power consumption (W)	<20			
Average power consumption (W)	<10			
Laser dimensions (W×H×L,mm)	82×79×190			
Operation temperature (°C)	10-40			
Storage temperature (°C)	0-60			

1. Operation Frequency is 16~200 Hz, in Continuous mode or Burst mode.
 2. Power adapter is included for shipment, support 90~260VAC input.

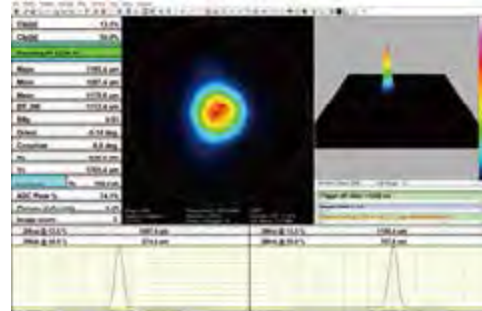
Order Information

Wavelength (nm)	Part Number	Repetition rate (Hz)	Pulse energy (μJ)
1064	MCO-1064-02-02	200	60
532	MCO-532-02-02	200	30
355	MCO-355-02-02	200	25
266	MCO-266-02-02	200	15

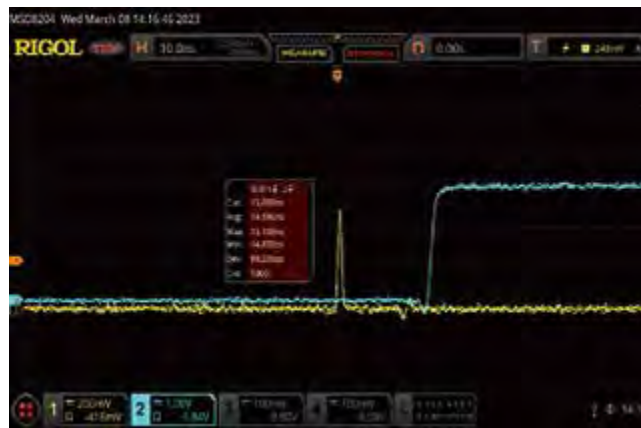
Part Numbering Schema



Typical Pulse Width



Beam Profile



Photodiode output signal

Mechanical Drawings (in mm)

