



MCO Series Energy Adjustable Free Space Microchip Laser

RealLight's 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.

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, @8h)	<3%				
Adjusting precision of output energy	1%				
Beam profile (Free space output)	TEM ₀₀				
Full angle divergence typ. (mrad)	Horizontal @1/e²		≤2		
	Vertical @1/e²		≤2		
Polarization	≥100:1				
System Parameters					
Supply power voltage	24V DC				
Modulation input	TTL 0~5V, SMB input				
Control interface	RS232				
Peak power consumption (W)	<30				
Average power consumption (W)	<15				
Laser dimensions (W×H×L,mm)	82×102.8×240				
Operation temperature (°C)	15~35				
Storage temperature (°C)	0~60				

Applications

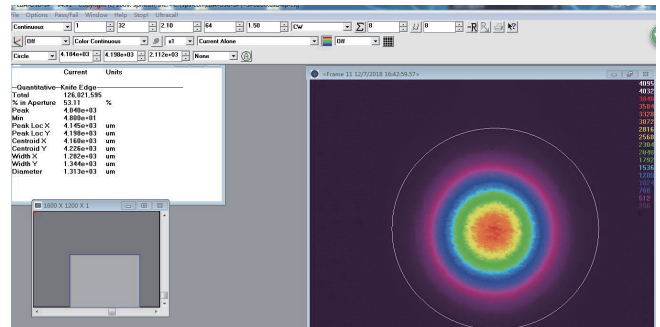
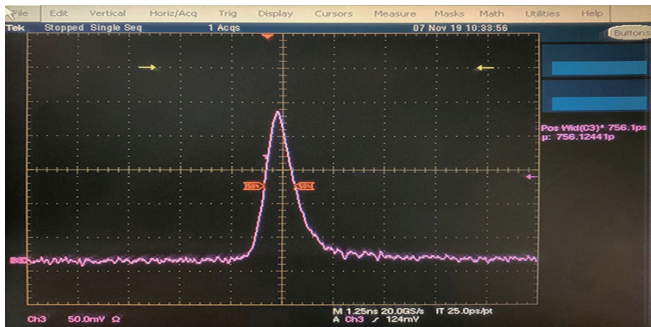
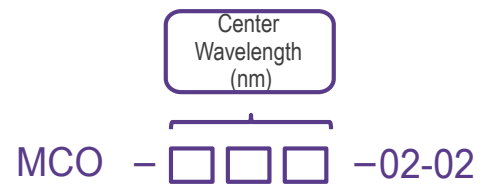
Laser engraving
Laser-induced breakdown spectroscopy (LIBS)
Laser photoluminescence
Laser marking
Laser capture microdissection
Laser-induced fluorescence (LIF)
Laser mass spectroscopy
Ultraviolet microscopy
Raman spectroscopy
LiADR
Thin film scribing and processing
Semiconductor inspection
Photoacoustic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

1. Operation Frequency is 16~200 Hz, in Continuous mode or Burst mode.
2. As products are constantly being updated, the right of final interpretation of technical specifications or illustrations in datasheet belongs to RealLight.
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.

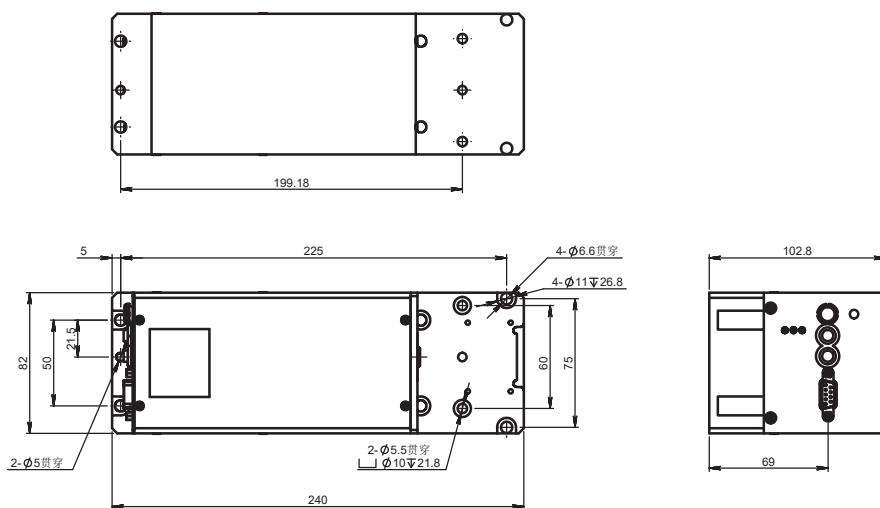
Order Information

Wavelength (nm)	Part Number	Repetition rate (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



Mechanical Drawings (in mm)



Free Space

