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 outputsignal with time jitter < 100ps
- Sealed package, high reliability
- Plug and play, include PC control software

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

Technical Specifications

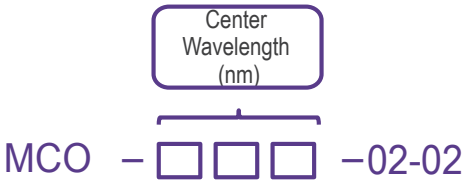
Optical Parameters					
Wavelength (nm)		1064	532	355	266
Repetition rate (Hz)		1~200			
Max. energy @ Free space output (μJ)		60	30	25	15
Pulse width (ns)		≤1			
Energy stability (RMS, @8h)		<3%			
Adjusting precision of output energy		1%			
Beam profile (Free space output)		TEM_{00}			
Full angle divergence 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 (℃)		15~35			
Storage temperature (℃)		0~60			

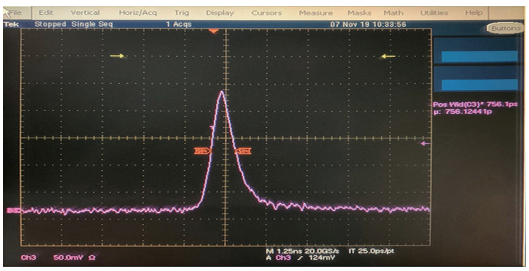
1. Operation Frequency is 16~200 Hz, in Continous mode or Burst mode.
2. As products are constantly being updated, the right of final interpretation of technical specifications or illustrations in datasheet belongs to RealLight.
3. All the data in the above table are the typical values obtained from the tests at room temperature of 25℃, and the final data is subject to the final test report.

Order Information

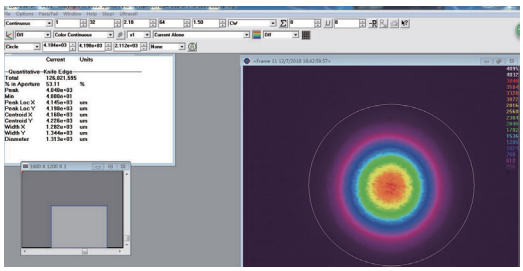
Wavelength (nm)	Part Number	Repetition rate (Hz)	Pulse energy (μJ)
1064	MCO-1064-02-02	200	60
532	MCO-532-02-02	200	30
355	MCO-355-02-02	200	25
266	MCO-266-02-02	200	15

Part Numbering Schema

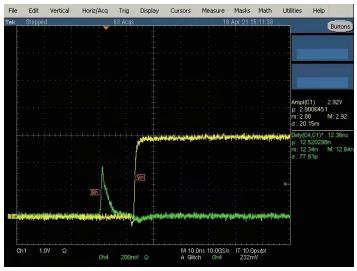




Typical Pluse



Beam Profile



photodetector module output

Mechanical Drawings (in mm)

