

MCL Series

2.5ns Microchip Laser



MCL series microchip lasers are RealLight's self-developed, passively Q-switched diode-pumped solid-state lasers, featuring stable single pulse energy, excellent beam quality and high reliability. The integrated design of diode-pumped module and laser crystal brings convenience to installation and integration due to the compact size. MCL series provides various wavelengths include 1319nm and 660nm, and supports internal and external triggering. The internal hermetic module of the laser head is available to customers for tailor-made development.

Key Features

- ◆ Pulse width down to 2.5ns
- ◆ Single pulse energy up to 50μJ
- ◆ Repetition rate up to 1kHz
- ◆ Spatial mode TEM₀₀
- ◆ Sealed package, high reliability
- ◆ Polarization-stable

Applications

- Photodynamic therapy
- Environmental monitoring
- Laser remote sensing
- LIDAR
- Spectroscopy
- Laser display

Technical Specifications

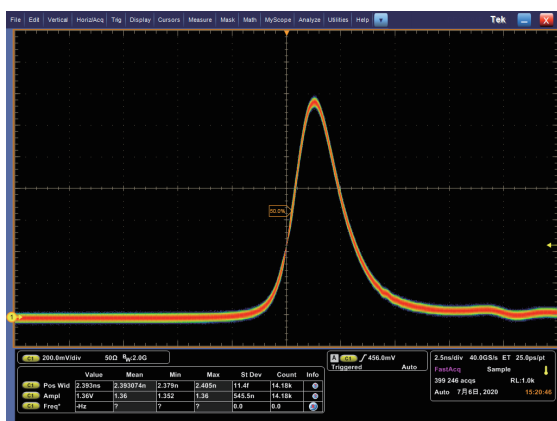
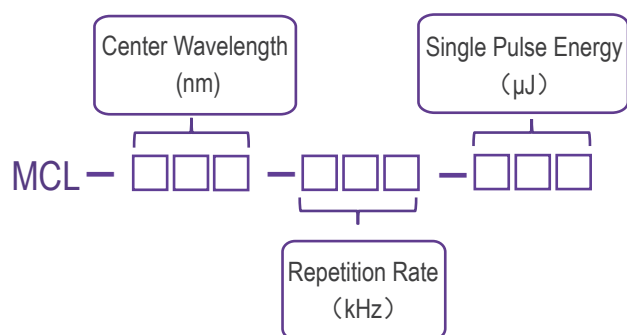
Optical Parameters			
Wavelength (nm)		1319	660
Repetition rate (kHz)		1	1*
Average power (mW)		50	10
Pulse energy (μJ)		50	10
Pulse width (ps)		2500	2000
Power stability (RMS, @8h)		<3%	
Beam profile		TEM ₀₀	
Beam full divergence (typ., mrad)	Horizontal @1/e ²	10	6
	Vertical @1/e ²	10	6
Polarization ratio		>100:1	
System Parameters			
Supply power voltage		100~240 VAC, 50/60 Hz	
Control interface		RS232	
Power consumption (W)		≤45	
Power dimensions (W×H×L,mm)		180×102×180	
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) .
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.

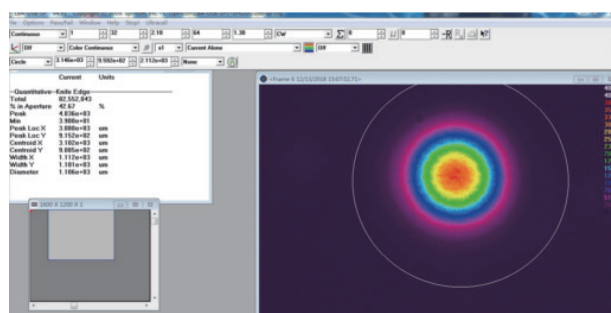
Order Information

Wavelength (nm)	Part Number	Repetition rate (kHz)	Pulse energy (μ J)
1319	MCL-1319-1-50	1	50
660	MCL-660-1-10	1	10

Part Numbering Schema

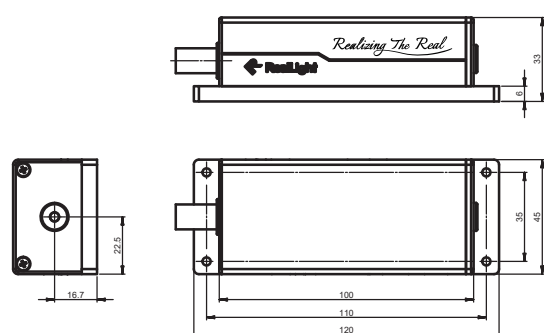


Typical Pulse

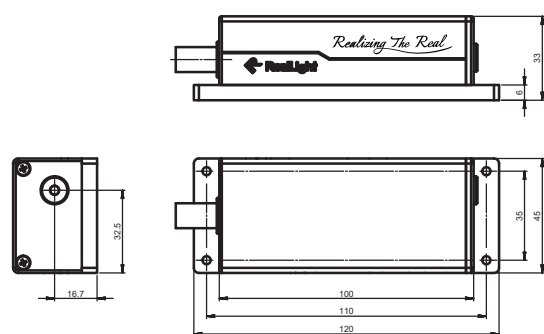


Beam Profile

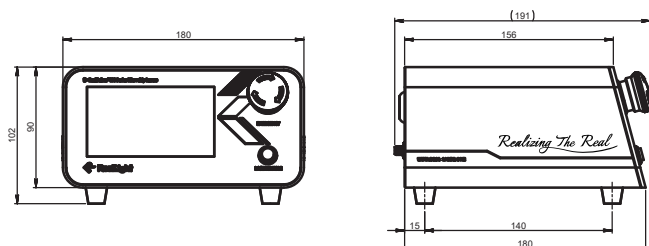
Mechanical Drawings (in mm)



Laser Head (middle laser outlet)



Laser Head (side laser outlet)



Power Supply

