



Electro Optical Components, Inc.

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MCD Series 300ps Microchip Laser



Applications

- Seed laser
- Micromachining
- Laser-induced breakdown spectroscopy (LIBS)
- Laser ionization mass spectroscopy (LIMS)
- Laser-induced fluorescence (LIF)
- Nonlinear optics

Key Features

- ◆ Pulse width down to 300ps
- ◆ Single pulse energy up to 150μJ
- ◆ Repetition rate up to 1kHz
- ◆ Spatial mode TEM₀₀
- ◆ Polarization-stable

Technical Specifications

Optical Parameters									
Wavelength (nm)	1064		532		355		266		
Repetition rate (kHz)	0.1	1	0.1	1	0.1*	1*	0.1*	1*	
Average power (mW)	15	50	7.5	25	3	10	1	5	
Pulse energy (μJ)	150	50	75	25	15	10	10	5	
Pulse width (ps)	300		300		300		300		
Power stability (8h)	±3%								
Beam profile	TEM ₀₀								
Full angle divergence Typ. (mrad)	Horizontal @1/e ²	≤5	≤9	≤3	≤6	≤3	≤4	≤2	≤3
	Vertical @1/e ²	≤5	≤9	≤3	≤6	≤3	≤4	≤2	≤3
Polarization	>100:1								
System Parameters									
Supply power voltage	100-240 VAC, 50/60 Hz								
Modulation input	TTL 0-5V, SMA input								
Control interface	RS232, USB								
Power consumption (W)	≤15	≤20	≤20	≤25	≤20	≤25	≤20	≤25	
Power dimensions (W×H×L,mm)	168×88×140/168×88×220*								
Laser head dimensions (W×H×L,mm)	45×30×120								
Operation temperature (°C)	15-35								
Storage temperature (°C)	0-60								

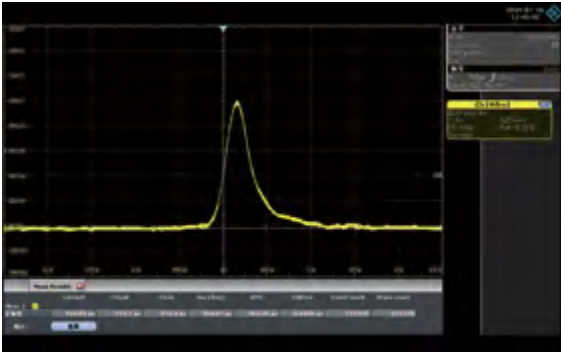
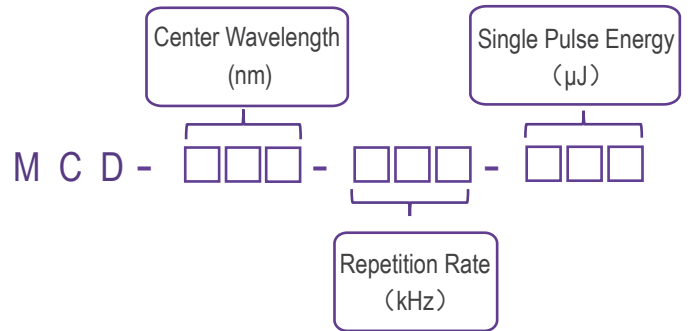
*1. Laser head features side laser outlet, please see mechanical drawings for more details.

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

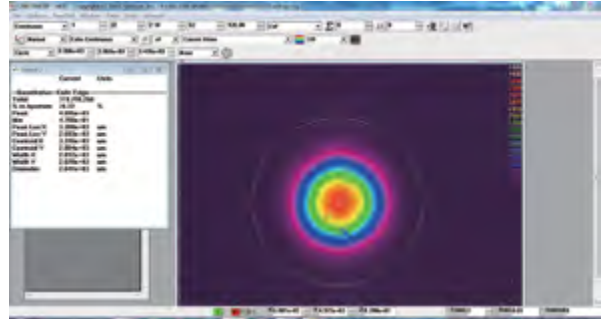
Order Information

Wavelength (nm)	Part Number	Repetition rate (kHz)	Pulse energy (μJ)
1064	MCD-1064-0.1-150	0.1	150
	MCD-1064-1-050	1	50
532	MCD-532-0.1-075	0.1	75
	MCD-532-1-025	1	25
355	MCD-355-0.1-030	0.1	30
	MCD-355-1-010	1	10
266	MCD-266-0.1-010	0.1	10
	MCD-266-1-005	1	5

Part Numbering Schema

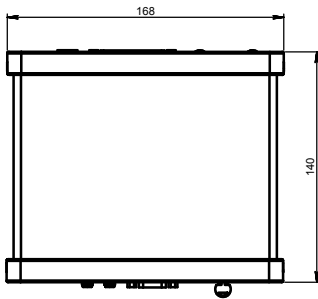
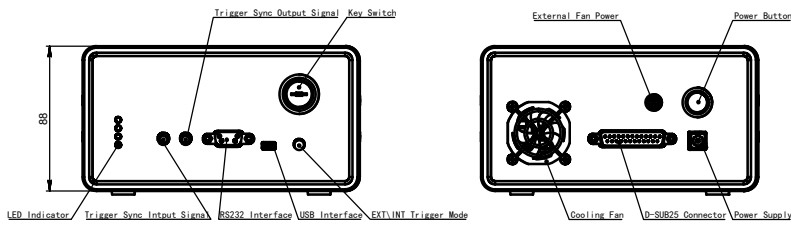


Typical Pulse

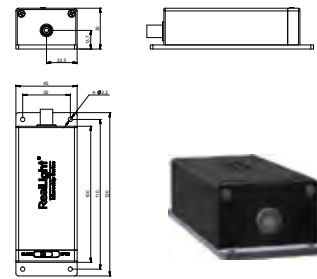


Beam Profile

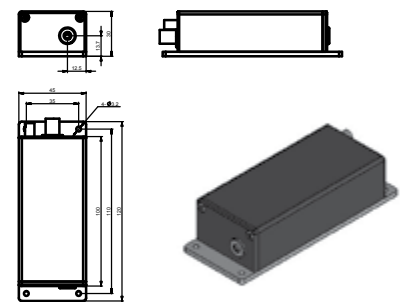
Mechanical Drawings (in mm)



Power Supply



Laser Head (middle laser outlet)



Laser Head (side laser outlet)

