

MCD Series 350ps-2ns Low Repetition Rate OEM Microchip Laser



MCD series microchip lasers are RealLight's passively Q-switched diode-pumped solid-state lasers. These lasers are equipped with compact OEM drive circuits, featuring small size, easy integration, excellent beam quality, stable pulse energy, dual pulse width, etc. RealLight also provides isolators with corresponding wavelengths. Custom lasers with higher energy of 1~2mJ are available upon request.

Key Features

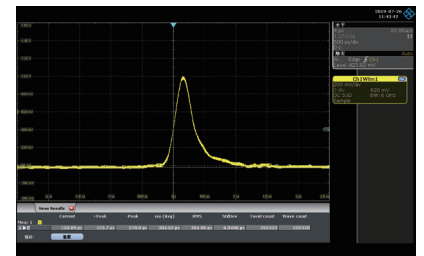
- ◆ Pulse width down to 350ps
- ◆ Pulse energy up to 300μJ
- ◆ High polarization direction stability
- ◆ Spatial mode TEM₀₀
- ◆ Compact structure and high reliability
- ◆ Dual pulse width output optional
- ◆ Red light indication optional

Technical Specifications

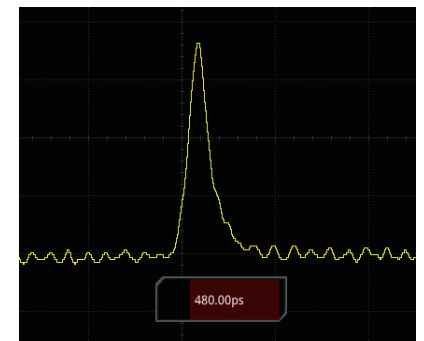
Optical Parameters			
Wavelength (nm)	1064		
Repetition rate (kHz)	0.01		
Average power (mW)	3	3	3/3
Pulse energy (μJ)	300	300	300/300
Pulse width (ps)	500	350	500/2000
Power stability (8h)	±3%		
Beam profile	TEM ₀₀		
Beam full divergence (typ., mrad)	Horizontal @1/e ²	10	6-4
	Vertical @1/e ²	10	6-4
Polarization ratio	P Polarization >100:1	500ps:P Polarization >100:1 2ns:S Polarization >100:1	
System Parameters			
Supply power voltage	12V 2A		
Control interface	SMA		
Power consumption (W)	≤10		
Power dimensions (W×H×L,mm)	68×35×120	100×23×100	
Laser head dimensions (W×H×L,mm)	45×30×120	145×70×46	
Operation temperature (°C)	15~35		
Storage temperature (°C)	0~60		

Applications

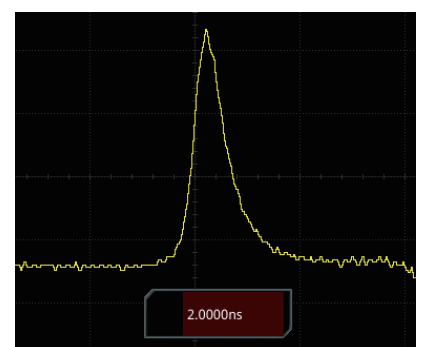
- Medical cosmetology
- Laser range finding
- Laser ablation



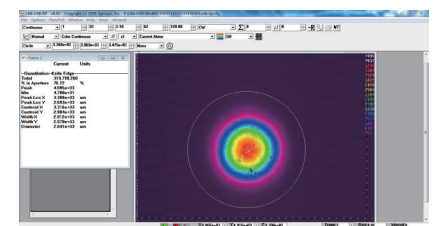
300ps Typical Pulse



500ps Typical Pulse



2ns Typical Pulse

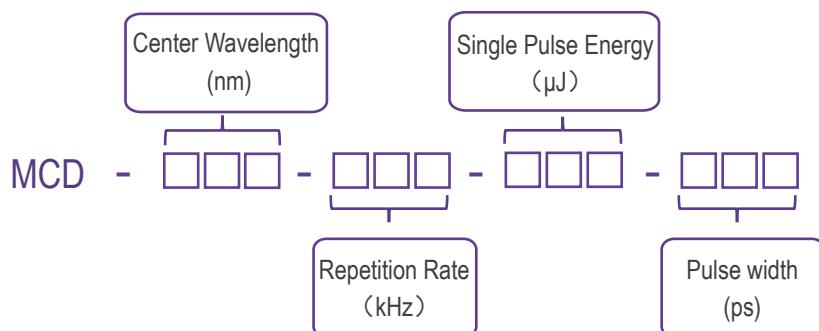


Beam Profile

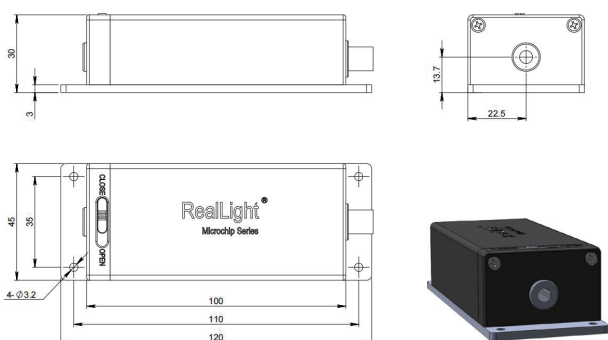
Order Information

Wavelength(nm)	Part Number	Repetition rate(kHz)	Pulse energy(μ J)	Pulse width(ps)
1064	MCD-1064-0.01-300-500	0.01	300	500
	MCD-1064-0.01-300-350	0.01	300	350
	MCD-1064-0.01-300/300-500/2000	0.01	300/300	500/2000

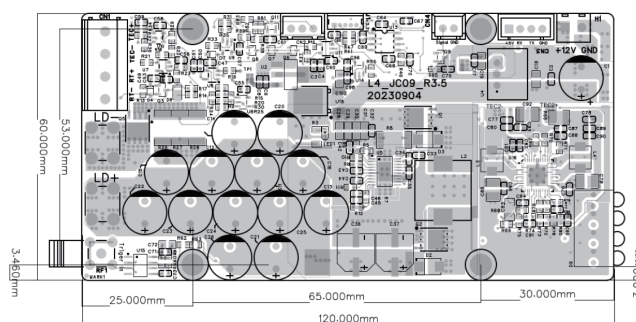
Part Numbering Schema



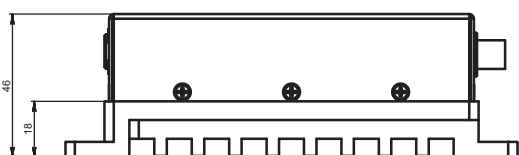
Mechanical Drawings (in mm)



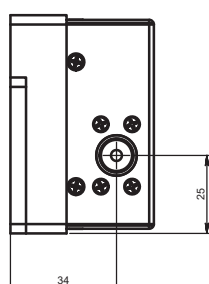
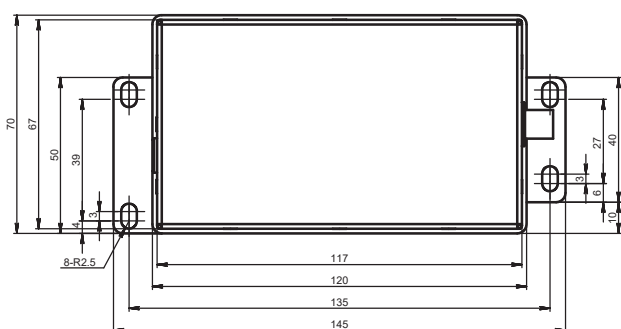
Single Pulse Width Laser Head



Single Pulse Width Laser Drive Board



Dual Pulse Width Laser Head



Dual-pulse-width Laser Drive Board

