



# Electro Optical Components, Inc.

5460 Skylane Boulevard, Santa Rosa, CA 95403

Toll Free: 855-EOC-6300

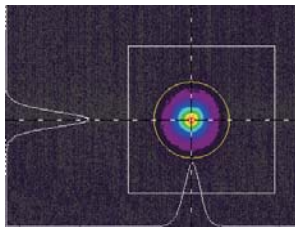
[www.eoc-inc.com](http://www.eoc-inc.com) | [info@eoc-inc.com](mailto:info@eoc-inc.com)



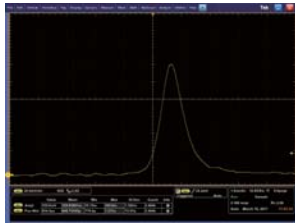
## 1064nm Sub-nanosecond DPSS Laser



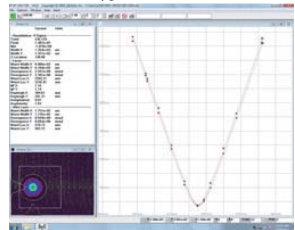
The 1064nm Sub-nanosecond Laser is based on a passively Q-switched DPSS laser with pulse length of only a few hundred picoseconds. The high pulse energy and excellent beam quality make it an ideal choice for industrial and scientific applications. The pump diode module is integrated in the power supply. The laser can be operated from external or internal trigger mode.



Beam profile



Typical Pulse



$M^2 < 1.2$

### Key Features

- ♦ Pulse width < 1ns (Min < 200ps);
- ♦ Pulse energy 10-100uJ (Max > 3mJ);
- ♦ Peak power up to 100kW;
- ♦ Internal and external trigger mode (repetition rate less than 10kHz);
- ♦ High repetition rate up to 100 kHz.

### Standard Wavelengths

1064nm

### Applications

- |                            |                       |
|----------------------------|-----------------------|
| Super-continuum generation | Seed light source     |
| Raman spectroscopy         | Ranging               |
| LIDAR                      | 3D Scanning           |
| 3D Imaging                 | Bio-photonic          |
| Micromachining             | Atmospheric detection |

Optical parameters					
Wavelength (nm)	1064				
Repetition rate(kHz)	0.5	1	5	10	20
Pulse width(ns)	1	0.6	0.6	0.9	0.8
Average output power(mW)	80	100	200	200	200
Pulse energy(μJ)	160	100	40	20	10
Short term power stability (1min)	≤1%				
Long term power stability (8hrs)	±3%				
Beam profile	TEM00				
Full angle divergence (mrad)	Horizontal @1/e²		typ.5		
	Vertical @1/e²		typ.5		
M²	<1.2				
Polarization (dB)	>100:1				
System parameters					
Power supply voltage	100-240V,50/60 Hz				
Modulation input	TTL				
Control interface	Serial Interface				
Power consumption	<50W				
Storage humidity	0-80%RH				
Power dimensions (W×H×L, mm)	250×100×300				
Laser head dimensions (W×H×L, mm)	45×25×78				
Operating temperature	15-35°C				
Storage temperature	0-50°C				

Note: Above 2 kHz more than one amplitudes with 10-20% jumps due to intrinsic laser dynamics may appear.





# Electro Optical Components, Inc.

5460 Skylane Boulevard, Santa Rosa, CA 95403

Toll Free: 855-EOC-6300

[www.eoc-inc.com](http://www.eoc-inc.com) | [info@eoc-inc.com](mailto:info@eoc-inc.com)



## 532nm Sub-nanosecond DPSS Laser



The 532nm Sub-nanosecond Laser is based on a passively Q-switched DPSS laser with pulse length of only a few hundred picoseconds. The high pulse energy and excellent beam quality make it an ideal source for industrial and scientific applications. The pump diode module is integrated in the power supply. The laser can be operated from external or internal trigger mode.

### Key Features

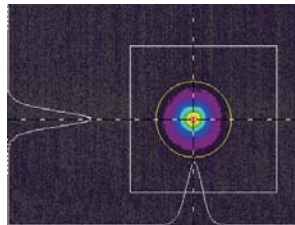
- ♦ Pulse width < 1ns (Min < 200ps);
- ♦ Pulse energy 10-80uJ (Max > 2mJ);
- ♦ Peak power up to 100kW;
- ♦ Internal and external trigger mode (repetition rate less than 10kHz);
- ♦ High repetition rate up to 100 kHz;

### Standard Wavelengths

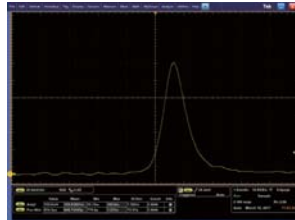
532nm

### Applications

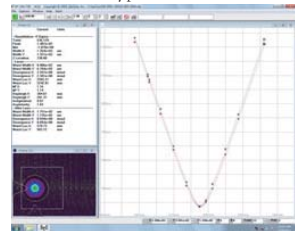
- Raman spectroscopy
- Atmospheric detection
- Non-linear optics
- Micromachining
- Laser Induced Fluorescence
- Mass spectrograph
- LIDAR
- Biohazard detection
- Two-photon microscopy



Beam profile



Typical Pulse



$M^2 < 1.2$

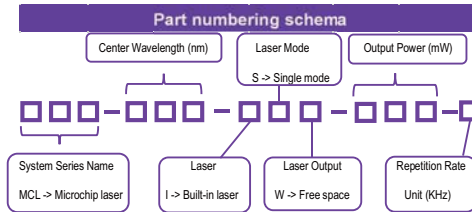
Optical parameters				
Wavelength (nm)	532			
Repetition rate(kHz)	0.5	1	5	10
Pulse width(ns)	0.8	0.5	0.5	0.7
Average output power(mW)	40	50	100	100
Pulse energy(μJ)	80	50	20	10
Short term power stability (1min)	≤ 1%			
Long term power stability (8hrs)	± 3%			
Beam profile	TEM00			
M²	< 1.3			
Polarization (dB)	> 100:1			
System parameters				
Power supply voltage	100-240V, 50/60Hz			
Modulation input	TTL			
Control interface	USB2.0, Serial Interface			
Power consumption	< 50W			
Storage humidity	0-80%RH			
Power dimensions (W×H×L, mm)	250×100×300			
Laser head dimensions (W×H×L, mm)	45×25×78			
Operating temperature	15-35°C			
Storage temperature	0-50°C			

Note: Above 2 kHz more than one amplitudes with 10-20% jumps due to intrinsic laser dynamics may appear.

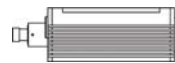
## Ordering information

MCL Series Model List			
Wavelength	Power	Part number	Repetition rate
532nm	40mW	MCL-532-ISW-040-0.5	0.5KHz
	50mW	MCL-532-ISW-050-1	1KHz
	100mW	MCL-532-ISW-100-5	5KHz
	100mW	MCL-532-ISW-100-10	10KHz

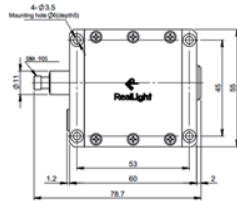
## Part numbering schema



## Mechanical Specifications



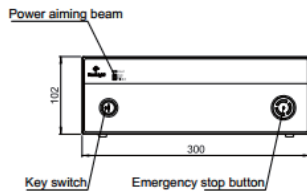
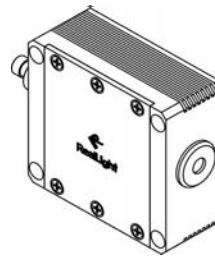
Laser Left View



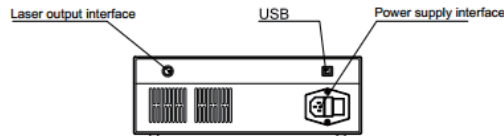
Laser Top View



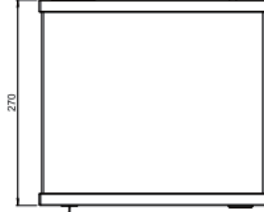
Laser Front View



Power Supply Front View



Power Supply Back View



Power Supply Top View



Unit: mm