

# MCH Series 300ps SLM Microchip Laser



## Key Features

- ◆ Pulse width down to 300ps
- ◆ High energy stability
- ◆ Repetition rate up to 100kHz
- ◆ Spatial mode TEM<sub>00</sub>
- ◆ Polarization-stable

## Applications

Seed laser  
Micromachining  
Raman spectroscopy  
Laser ranging  
Laser-induced fluorescence (LIF)  
Laser ultrasonic imaging  
Bio-photonics  
Photolithography

## Technical Specifications

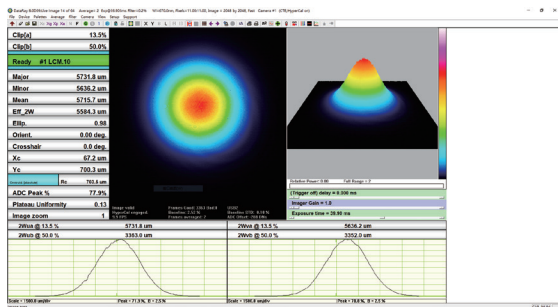
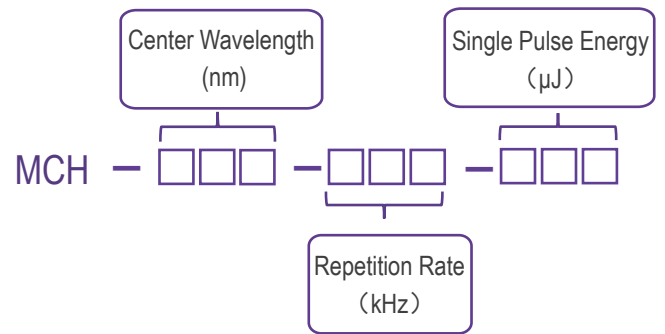
| Optical Parameters                   |                              |                       |     |     |     |     |     |
|--------------------------------------|------------------------------|-----------------------|-----|-----|-----|-----|-----|
| Wavelength（nm）                       |                              | 1064                  |     |     | 532 |     |     |
| Repetition rate（kHz）                 |                              | 20                    | 50  | 100 | 20  | 50  | 100 |
| Average power（mW）                    |                              | 60                    | 100 | 100 | 30  | 50  | 50  |
| Pulse energy（μJ）                     |                              | 3                     | 2   | 1   | 1.5 | 1   | 0.5 |
| Pulse width（ps）                      |                              | 350                   |     | 500 | 300 |     | 500 |
| Power stability（RMS, @8h）            |                              | <3%                   |     |     |     |     |     |
| Beam profile                         |                              | TEM <sub>00</sub>     |     |     |     |     |     |
| Beam full divergence<br>(typ., mrad) | Horizontal @1/e <sup>2</sup> | 25                    |     | 30  | 16  |     | 25  |
|                                      | Vertical @1/e <sup>2</sup>   | 25                    |     | 30  | 16  |     | 25  |
| Polarization ratio                   |                              | >100:1                |     |     |     |     |     |
| System Parameters                    |                              |                       |     |     |     |     |     |
| Supply power voltage                 |                              | 100~240 VAC, 50/60 Hz |     |     |     |     |     |
| Control interface                    |                              | RS232                 |     |     |     |     |     |
| Power consumption（W）                 |                              | ≤35                   | ≤40 | ≤40 | ≤35 | ≤40 | ≤40 |
| Power dimensions（W×H×L,mm）           |                              | 150×54×105            |     |     |     |     |     |
| Laser head dimensions（W×H×L,mm）      |                              | 45×33×120             |     |     |     |     |     |
| Operation temperature（℃）             |                              | 15~35                 |     |     |     |     |     |
| Storage temperature（℃）               |                              | 0~60                  |     |     |     |     |     |

1. Wavelengths of 355nm and 266nm are available upon request.
2. Other repetition rates can be customized.
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.

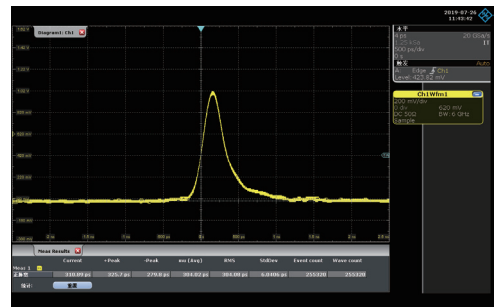
## Order Information

| Wavelength (nm) | Part Number     | Repetition rate (kHz) | Pulse energy (μJ) |
|-----------------|-----------------|-----------------------|-------------------|
| 1064            | MCH-1064-20-3   | 20                    | 3                 |
|                 | MCH-1064-50-2   | 50                    | 2                 |
|                 | MCH-1064-100-1  | 100                   | 1                 |
| 532             | MCH-532-20-1.5  | 20                    | 1.5               |
|                 | MCH-532-50-1    | 50                    | 1                 |
|                 | MCH-532-100-0.5 | 100                   | 0.5               |

## Part Numbering Schema

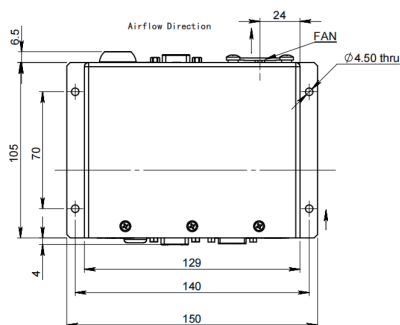
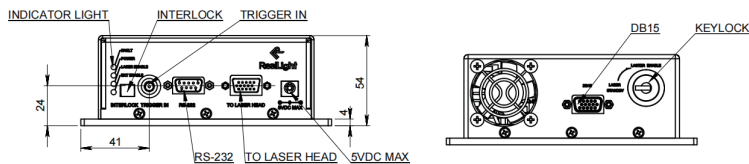


Beam Profile (1064nm)

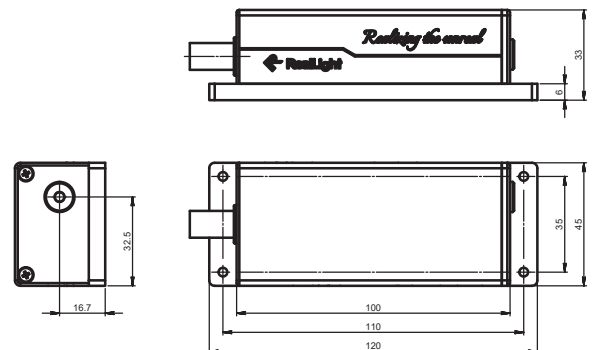


Typical Pulse

## Mechanical Drawings (in mm)



Power Supply



Laser Head

