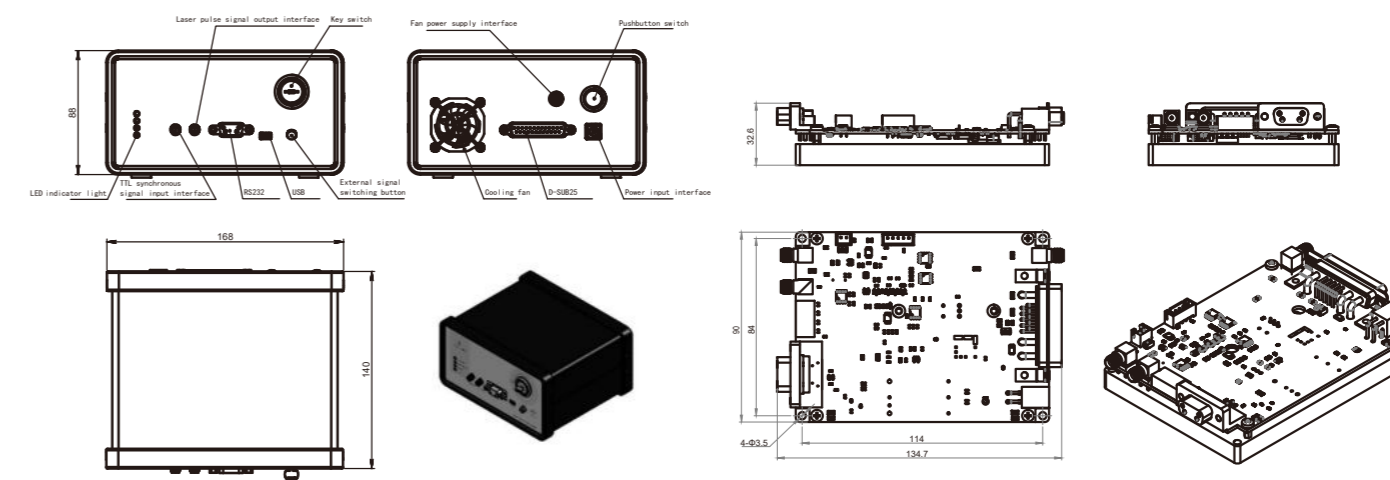


1064nm Nd:YAG q-switched nanosecond laser MA Microchip laser system



OUTLINE SIZE(mm)



DESCRIPTION

1064nm laser is one of the most common laser among ULaser's products of solid state laser. Unlike other lasers, 1064nm laser beam is directly emitted from the Nd:YAG crystal. Q-switched crystal helps our laser to emit picosecond output light beam. Either the one with single longitudinal mode or the one with fundamental mode can be chosen in ULaser.

ULaser provides absolute high quality 1064 nm laser. Our 1064nm laser contains high average power, up to 100mW. And it has high pulse repetition frequency, up to 50kHz. At the same time, our 1064nm laser has smaller size and lower power consumption by microchip laser technology.

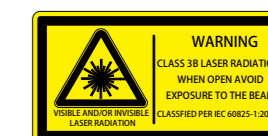
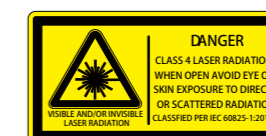
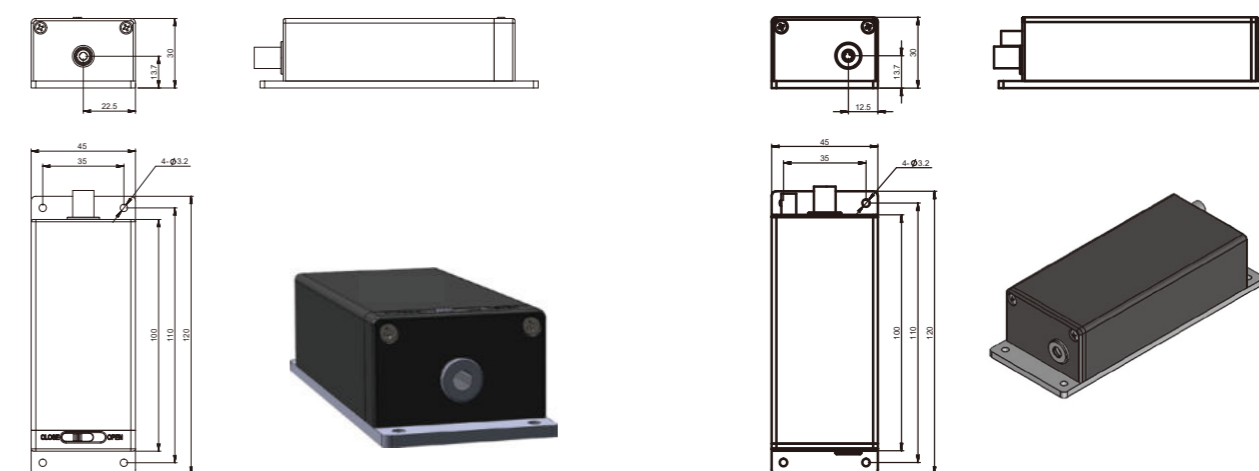
Our 1064nm laser can be used in most military, civil and scientific research fields. In industry, it can be used in micromachining. In cosmetology, it can be used in picosecond laser tattoo removal machine. Besides, it can also be used in laser ultrasound, laser induced breakdown spectroscopy, etc.

FEATURES

- Pulse width up to 1ns
- Pulse energy up to 200μJ
- Repetition frequency up to 20kHz
- Beam mode is TEM₀₀
- Fully sealed design, high reliability

APPLICATIONS

- Lidar
- Laser ranging
- Atmospheric monitoring
- Laser ultrasonic inspection
- Optical metrology
- Laser-induced fluorescence



PARAMETERS

| Model | UL1064-1kHz-120μJ-MA016 | UL1064-1kHz-200μJ-MA017 | UL1064-2.5kHz-120μJ-MA018 | UL1064-2.5kHz-200μJ-MA019 | UL1064-5kHz-60μJ-MA020 | UL1064-10kHz-40μJ-MA021 | UL1064-20kHz-20μJ-MA022 |
|--|-------------------------|-------------------------|---------------------------|---------------------------|------------------------|-------------------------|-------------------------|
| Wavelength (nm) | 1064 | 1064 | 1064 | 1064 | 1064 | 1064 | 1064 |
| Repetition frequency (kHz) | 1 | 1* | 2.5 | 2.5* | 5 | 10 | 20 |
| Average power (mW) | 120 | 200 | 300 | 500 | 300 | 400 | 400 |
| Output energy (μJ) | 120 | 200 | 120 | 200 | 60 | 40 | 20 |
| Pulse width (ps) | 2000 | 2000 | 2000 | 2000 | 1500 | 1500 | 1500 |
| Power stability (8h) | ±3% | ±3% | ±3% | ±3% | ±3% | ±3% | ±3% |
| Beam mode | TEM ₀₀ | TEM ₀₀ | TEM ₀₀ | TEM ₀₀ | TEM ₀₀ | TEM ₀₀ | TEM ₀₀ |
| Full-angle divergence angle Typ. (Mrad) level@1/e ² | 8 | ≤3 | ≤3 | ≤3 | 8 | 8 | 8 |
| Vertical @1/e ² | 8 | ≤3 | ≤3 | ≤3 | 8 | 8 | 8 |
| Polarization characteristics | > 100:1 | > 100:1 | > 100:1 | > 100:1 | > 100:1 | > 100:1 | > 100:1 |
| Power input | 100-240 VAC,50/60Hz | 100-240 VAC,50/60Hz | 100-240 VAC,50/60Hz | 100-240 VAC,50/60Hz | 100-240 VAC,50/60Hz | 100-240 VAC,50/60Hz | 100-240 VAC,50/60Hz |
| Control interface | RS232, USB | RS232, USB | RS232, USB | RS232, USB | RS232, USB | RS232, USB | RS232, USB |
| System power consumption (W) | ≤35 | ≤20 | ≤20 | ≤25 | ≤35 | ≤35 | ≤35 |
| Power supply size (W × H × L, mm) | 168×88×140 | 90×32.6×120 | 90×32.6×120 | 90×32.6×120 | 168×88×140 | 168×88×140 | 168×88×140 |
| Laser head size (W × H × L, mm) | 45×30×120 | 45×30×120 | 45×30×120 | 45×30×120 | 45×30×120 | 45×30×120 | 45×30×120 |
| Working temperature (°C) | 15-35 | 15-35 | 15-35 | 15-35 | 15-35 | 15-35 | 15-35 |
| Storage temperature (°C) | 0-60 | 0-60 | 0-60 | 0-60 | 0-60 | 0-60 | 0-60 |

1.*The light outlet of the laser head is side outlet. See the mechanical dimension drawing for details

2.Customized internal beam expansion function to meet the requirements of small divergence angle (less than 2mrad)

3. MA017, MA018, and MA019 are specially designed for miniaturized weather radar applications. They are small in size, low in power consumption, and can be used in high altitudes, large temperature differences, and other subserve environments. This series accepts dual wavelength laser customization, such as 1064nm&8532nm, 1064nm&355nm, or others.

