



Single Frequency CW Fiber Laser FLS Series

Data Sheet



Overview

The FLS series is a line of all polarization fiber single frequency mode high power lasers at 1064nm and 1550nm and delivers output power levels up to 1000mW. The laser consists of the seed laser and an amplifier optimized for low noise operation and application, demanding more optical power. The 1064nm FLS series laser is designed for operation in ranging, gravitational wave, scientific research, and many other applications. The 1550nm FLS series is designed for operation in acoustic and seismic sensing, medical cosmetology, LIDAR, metrology, wind sensing, security, experimental research, and many other applications.

Features

- 1064nm and 1550nm wavelength
- CW operating mode
- Optical output power 50mW to 1000mW
- Single frequency / single longitudinal mode

Applications

- Ranging
- Gravitation wave
- Scientific research
- Acoustic and seismic sensing
- Medical cosmetology
- LIDAR
- Metrology
- Wind sensing
- Security
- Experimental research

1064-1550 nm Specifications

| Parameter | FLS1064 | FLS1550 | |
|-------------------------------------|--------------------------|-------------------|-------------------|
| Wavelength | 1064±1 nm | 1550±1 nm | |
| Operating mode | CW | CW | |
| Output power | ~10 mW, ~100 mW, ~500 mW | ~300 mW, ~500 mW | ~800 mW, ~1000 mW |
| Power stability (rms, over 4 hours) | <3%, <1% | <3%, <1% | |
| Transverse mode | TEM ₀₀ | TEM ₀₀ | |
| Longitudinal mode | Single | Single | |
| Spectral linewidth | <100 kHz | <100 kHz | <2000 kHz |
| Frequency shift | <10 MHz @ 1 hour | | |
| M ² factor | <1.2 | <1.2 | |
| Beam delivery optics | FC/APC | FC/APC | |
| Polarization ratio | >15 dB | >15 dB | Random/>15 dB |
| Warm-up time | <30 min | <15 min | |
| Beam height from base plate | | 58 | |
| Operating temperature | 15-30°C | 15-35°C | |
| Expected lifetime | 10,000 hours | 10,000 hours | |
| RS232 Interface Option | Available | Available | |
| Warranty | 10 months | 10 months | |

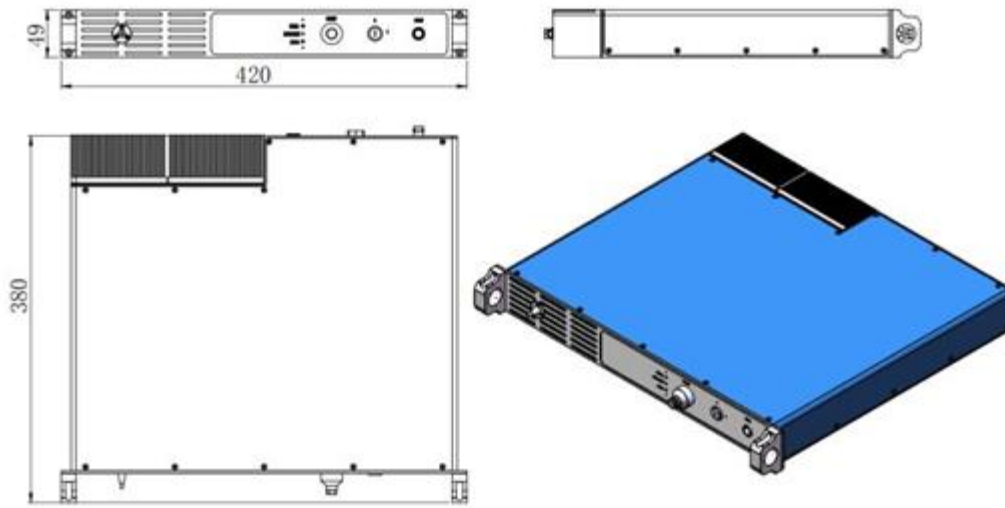
Remarks:

- The fiber lasers are designated solely as OEM components for incorporation into the customer's end products. It is the customer's responsibility to comply with FDA requirements of FDA 21CFR, section 1040.10 and 1040.11 for complete laser products. For the code of FDA regulations, please refer to [FDA Performance Standards for Light-Emitting Products](#) for detailed information.
- Specifications are subject to change without notice.

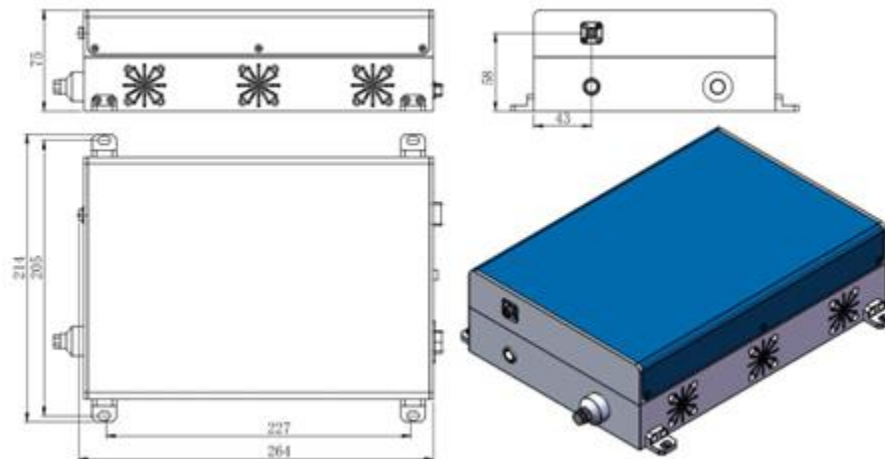
FLS Series Laser Dimensions

Unit: mm

Spectral linewidth <100kHz



Spectral linewidth <2000kHz



| Parameter | Spectral linewidth <100kHz | Spectral linewidth <2000kHz |
|---------------|---------------------------------------|---------------------------------------|
| Dimensions | 420(L) x380(W) x49(H) mm ³ | 264(L) x214(W) x75(H) mm ³ |
| Weight | 7 kg | 3 kg |
| Input voltage | 12V DC | 12V DC |

Ordering Information

For more information, please contact Lasermate directly at sales@lasermate.com.

| Part Number Configuration FLS[1][2][3][4] | | | | |
|--|------------------------------|--|----------------------------|-----------------------|
| FLS = Laser Model Series | [1] = Wavelength | [2] = Output Power | [3] = Power Stability | [4] = RS232 Interface |
| | 1064= 1064nm 1550= 1550nm | 50= 50mW 100= 100mW 300= 300mW 500= 500mW 800= 800mW 1W= 1000mW | E= <3% 2= <2% D= <1% | Blank=No R=Yes |

Note: The above specifications are subject to change without notice.