FL-PL Series

Green/UV/DUV portable nanosecond pulsed laser

High repetition rate short pulses lasers for sensing applications

532nm | 355nm | 266nm

Product Overview

Combination of frequency convertor with 1064nm nanosecond pulsed fiber laser realized 532nm(Green)/355nm(Ultra-violet(UV))/266nm(Deep-UV(DUV)) laser light. OXIDE's nonlinear optical crystals with high quality and functionality are integrated into the frequency convertors. High repetition rate (50 kHz) and high peak power are suitable for sensing applications such as LiDAR. In addition, optimized optical design without resonators realized simple, high reliability, and lightweight laser units.

Features

- **Compact (portable)**
  Both the fiber laser and the wavelength converter are palm-sized. Furthermore, total weight is less than 1.5kg (3.3lbs)*. (*power supply is not included).
- **High peak power / High repetition rate**
  High conversion efficiency offers >10kW peak pulses at 532nm and >1.5kW at 355/266nm.
  The pulse repetition rate is 50kHz which is suitable for sensing to improve S/N ratio for measurement.
- **High reliability**
  Maintenance free by OXIDE's spectacular quality crystals and the high stability fiber lasers.
  Optimization of nonlinear device and optical design realize compact reliable solution.
- **Wavelength selectable**
  Wavelength converters are compatible design. Customer can select wavelength by exchanging frequency convertor with the same 1064 nm fiber laser.

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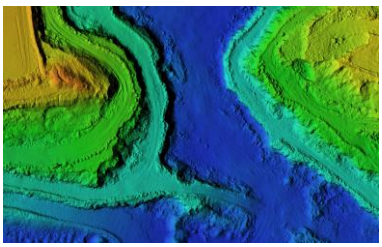
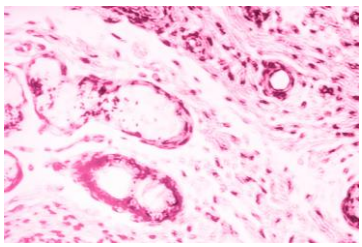
FL-PL Series

Applications

- LiDAR
- Bioanalysis
- Virus inactivation
- Raman spectroscopy
- Aerosol detection





Specifications

（Preliminary @25°C）

Model	FL-PL-SHG (FL-PL-SHGFM)	FL-PL-UV	FL-PL-DUV
Pulse Repetition rate	50 kHz	50 kHz	50 kHz
Pulse Width	~1 ns	~1 ns	~1 ns
Wavelength	532 nm (532・1064 nm)	355 nm	266 nm
Output Power (Average)	500 mW (500・500 mW)	80 - 200 mW	100 mW
Pulse Energy	~ 10 μJ	~1.6 - 4.0 μJ	~2.0 μJ
Peak Power	~ 10 kW	~1.6 - 4.0 kW	~2.0 kW
Beam Quality (M^2)	<1.4	<1.5	—（Elliptical）
Polarization	Vertical, Linear	Vertical, Linear	Horizontal, Linear
Power Tunability	20 – 100 %	20 – 100 %	20 – 100 %
Output Type	Free space	Free space	Free space
Dimensions (Fiber laser)	120×27×120 mm		
Dimensions (Convertor)	40×40×62 mm	40×40×87 mm 40×40×128 mm	40×40×138 mm
Features/Application	• Integration for drones and Submarines • Underwater LiDAR	• Integration for drones • Aerosol detection • Underwater LiDAR	• Virus inactivation • Aerosol detection

We offer more options of pulse repetition rate, beam quality to meet your needs.
Please feel free to contact us.

※These products are based on results obtained from a project commissioned by the New Energy and Industrial Technology Development Organization.

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