

Laser Systems

Four-In-One Fiber-Coupled Laser System

Four-band single-mode laser: high beam quality, compact.

- Four-band integrated design simplifies the deployment of multi-wavelength scenarios
- Single-mode fiber offers high beam quality, suitable for precision scenarios
- High stability + intelligent control, ensuring reliable data and convenient operation
- Compact integration + wide environmental adaptability, flexible deployment



One Platform Many Possibilities

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Get a Quote



Get Expert Advice
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www.venuslabtech.com

Overview

Introduction:

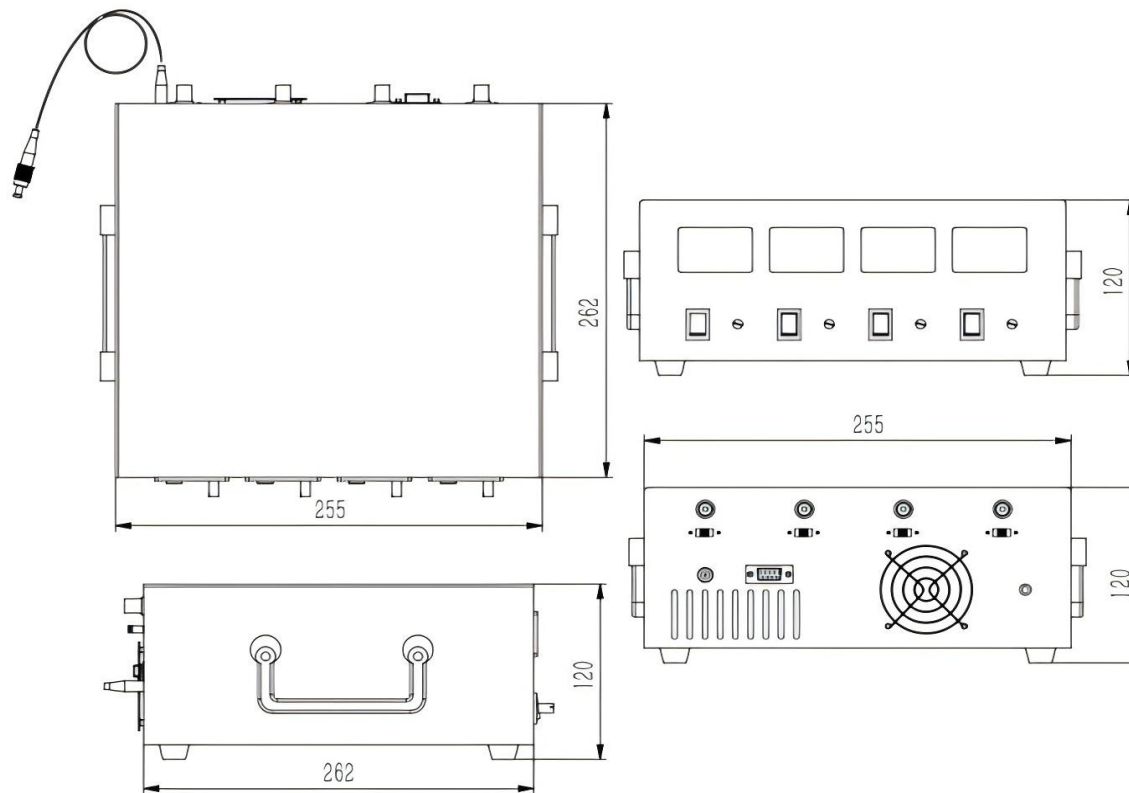
Four commonly used laser bands are integrated into the same system. There is no need to additionally set up 4 single-wavelength devices, and "multi-band simultaneous/switchable output" can be achieved. This significantly reduces the equipment footprint and procurement costs, and is especially suitable for scenarios requiring multi-color excitation (such as multi-color fluorescence imaging) and multi-band spectral analysis, avoiding synchronization errors between multiple devices.

9 μ m core diameter single-mode fiber (SF) + 0.13 numerical aperture, the output spot is close to an ideal Gaussian distribution, with a focusing accuracy up to the micrometer level, which is far superior to the beam quality of multimode fibers. It is suitable for scenarios such as Raman spectroscopy, confocal microscopy, and precision material detection that require "small spot + high energy concentration".

Features:

- Four-band integrated design
- Single-mode fiber with high beam quality
- High stability + intelligent control
- Compact integration + wide environmental adaptability

Dimension:



Specifications

Common Parameter Specification Table

Core Integration Feature	Integrated with 4-band laser modules, dedicated modulation module, high-precision driving power supply, and air cooling unit
Laser Type	FP (Fabry-Perot) Laser
Spectral Width	3nm
Central Wavelength Accuracy	± 3 nm
Fiber Core Diameter	9 μ m (Fixed)
Numerical Aperture (NA)	0.13
Fiber Length	1m
Operating Mode	CW (Continuous Wave) Mode (Standard)
Remote Control Method	RS232 Software Control (supports independent on/off and power adjustment for each band)
2-Hour Continuous Operation Stability	2%

Cooling Method	Air Cooling
Control Mode	Automatic Current Control (ACC)
Operating Temperature	+10 ~ +40
Storage Temperature	-20 ~ +60
Warm-Up Time	< 5 Minutes
Standard AC Power Supply	90V ~ 240VAC, Frequency 50 ~ 60Hz
Optional DC Power Supply	+12V
Optional Accessory	Collimating Lens
Operation & Maintenance	Plug-and-play (no additional core components required), maintenance-free design, long service life

Service & Support

We are dedicated to delivering exceptional optoelectronic solutions to every client. From precision manufacturing and secure delivery to full-lifecycle technical support, we are here to ensure a seamless and reliable experience at every step.

1. Warranty Policy

Quality First, Worry-Free Operation

Warranty Period: We offer a **two-year** warranty service for all of our core optoelectronic products, effective from the date of shipment.

Coverage: We provide free repair or replacement services for malfunctions caused by material defects or workmanship errors under normal operating conditions.

Rapid Response: Upon receiving a warranty claim, we guarantee to initiate the assessment process within **24 hours** to minimize your equipment downtime.

2. Technical Support

Expert Team, Full-Process Guidance

Technical Consultation: Our team of senior optical engineers provides **24/7 online support** to assist with installation, commissioning, optical path alignment, and parameter optimization.

Scheduled Maintenance: We offer full-lifecycle maintenance recommendations, including firmware upgrades, optical component cleaning guidelines, and precision calibration services.

Training Services: We provide customized remote or on-site operational and safety training to ensure your team can operate the equipment efficiently and safely.

3. Logistics & Delivery

Precision Packaging, Global Reach

Professional Packaging: Given the fragile nature of optical instruments, we utilize industrial-grade shockproof, anti-static, and moisture-proof vacuum packaging to ensure zero damage during transit.

Logistics Partners: We partner with top-tier global logistics providers (**DHL / FedEx / UPS / SF Express**) to offer reliable shipping with real-time tracking.

Shipping Insurance: All shipments are fully insured to eliminate logistics risks.

4. Compliance & Certification


Strict Standards, Total Compliance

Quality Certification: Our manufacturing process is **ISO 9001 certified**, and our products comply with international standards such as **CE** and **RoHS**.

Export Compliance: "Committed to environmental responsibility, all our products comply with **RoHS 2.0** and **REACH** standards, ensuring safety and global compliance."

Explore Series

Model	Output power	Central Wavelength	Fiber optic types	Fiber optic interface
VLFL-405+450+520+638-SF	20mW per channel	(405、 450、 520、 638) ±3 nm	Single-Mode Fiber	FC/SMA905/SC/ST (Optional)
VLFL-488+520+638+785-SF	20mW per channel	(488、 520、 638、 785) ±3 nm	Single-Mode Fiber	FC/SMA905/SC/ST (Optional)

 Get in touch with our team to explore configurations, request a quote, or learn more about customized solutions tailored to your needs.

Let us help you move science forward—faster and smarter.

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