VENUSLAB
OPTOELECTRONICS

Precision
Meets
Simplicity

Laser Systems

VLFL-450 Series Fiber-Coupled Laser Systems

Near-UV – blue integrated laser: 30 – 3500mW, customizable.

- High integration and ease of use
- High-precision performance control
- Strong customization and wide adaptability
- Long service life and low maintenance cost

One Platform Many Possibilities

Contact Us sales@venuslabtech.com

Get a Quote

Get Expert Advice
+658099 5547（WhatsApp）

Visit Us
www.venuslabtech.com

VLFL-450 Series Fiber-Coupled Laser Systems

Overview

Introduction:

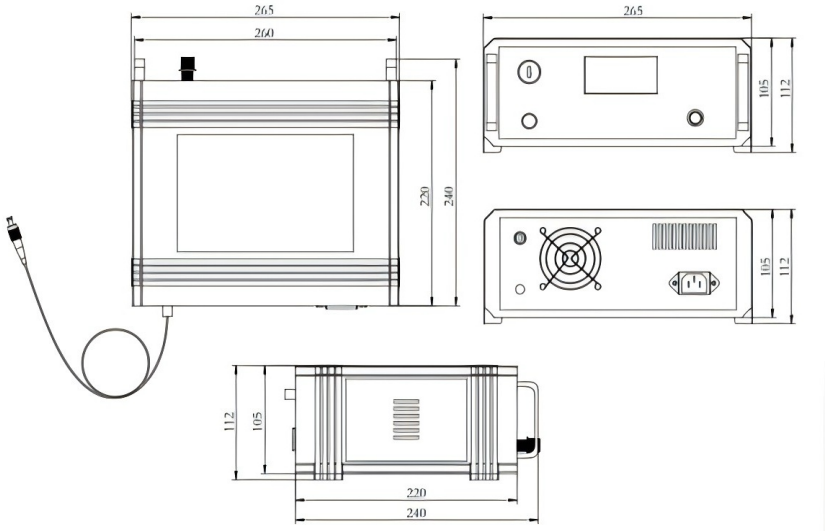
Developed by Venuslab, the near-ultraviolet to blue light band fiber-coupled laser system features a highly unified core architecture: it integrates a laser module, a dedicated modulation module, a high-precision driving power supply, and a n air-cooled refrigeration unit. It is compatible with the A-1 standard chassis (dimensions: 265mm×240mm×112mm) an d supports dual power supply modes of AC 90V~240V (50~60Hz) or DC +12V. The warm-up time is less than 5 minut es, the operating temperature range is +10℃~+40℃, and the storage temperature range is -20℃~+60℃.

In terms of control performance, all adopt Automatic Current Control (ACC) technology, supporting three working modes (CW continuous wave, 0~20KHz TTL digital modulation, 0~5V Analog modulation), with a power stability of ≤3 % during 2-hour continuous operation; The basic optical configuration is uniformly FP type laser with a spectral width of 2nm, and all provide optional collimating lenses and customized services (power, fiber parameters, connectors, etc.) . The application fields cover biomedical, scientific research, material analysis, 3D printing, test light sources, gas detection and other scenarios.

Features:

- High stability
- High beam quality
- High signal-to-noise ratio (SNR)
- Customized services

Dimension:



Specifications

Common Parameter Specification Table

Optical Parameters	Laser Type	FP (Fabry-Perot) Laser
Optical Parameters	Spectral Width (Typical Value)	2nm
Fiber Parameters	Fiber Length	≥1m
Fiber Parameters	Fiber Interface	FC/SMA905/SC/ST (Optional)
Control Data	Operating Modes	1. CW (Continuous Wave) Mode (Standard); 2. 0~20KHz TTL Modulation Mode; 3. 0~5V Analog Modulation Mode
Control Data	Control Mode	Automatic Current Control (ACC)
Control Data	Cooling Method	Air Cooling
Control Data	2-Hour Continuous Operation Stability	Min. 2%, Max. 3%
Operating Environment	Operating Temperature	+10℃～+40℃

Operating Environment	Storage Temperature	-20℃～+60℃
Operating Environment	Warm-Up Time	＜5 Minutes
Power Supply	Standard AC Power Supply	90V～240VAC, Frequency 50～60Hz
Power Supply	Optional DC Power Supply	+12V
Chassis & Accessories	Chassis Model	Type A-1
Chassis & Accessories	Chassis Dimension (Unit: mm)	265mm×240mm×112mm
Chassis & Accessories	Optional Accessory	Collimating Lens
Basic Product Attributes	Core Function	Integrated with laser module, dedicated modulation module, and high-precision driving power supply
Basic Product Attributes	Maintenance Feature	Easy to operate, maintenance-free, long service life

Serivce & 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."

VENUSLAB
OPTOELECTRONICS

VLFL-450 Series Fiber-Coupled Laser Systems

Explore Series

Model	Output power	Central Wavelength	Fiber optic types	Fiber optic interface
VLFL-445-MF-1000	1000	440~460	Multimodal	FC/SMA905/SC/ST
VLFL-450-MF-60	60mW	440~460nm	Multimodal	FC/SMA905/SC/ST (Optional)
VLFL-450-PM-30	30mW	440~460nm	Polarization-Maintaining Fiber	FC/SMA905/SC/ST (Optional)
VLFL-450-SF-40	40mW	440~460nm	Single-Mode Fiber	FC/SMA905/SC/ST (Optional)
VLFL-455-MF-3500	3500mW	450~460nm	Multimodal	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 moves cience forward—faster and smarter.

Get a Quote

Get Expert Advice
+658099 5547（WhatsApp）

Visit Us
www.venuslabtech.com