

High-Stability Laser Engines

VLFL-LS High-Stability Laser Engine

High-performance General-purpose Laser Light Source Solution

- Ultra-high stability laser output
- Broad spectral coverage and customization capability
- Flexible modulation and integration characteristics
- Industrial-grade reliability assurance



One Platform Many Possibilities

Contact Us sales@venuslabtech.com

Get a Quote



Get Expert Advice
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www.venuslabtech.com

Overview

Introduction:

The VLFL-LS series is a high-performance laser module product family covering multi-wavelength bands. It includes 15 sub-models ranging from 405nm (deep ultraviolet, DUV) to 980nm (near-infrared, NIR), fully covering the key optical bands from ultraviolet to near-infrared. Adopting a modular design, the series features a standard housing dimension of only 70×40×45mm, achieving a balance between laboratory-grade precision and industrial-grade reliability through its compact structure. As a general-purpose laser light source, this series supports three operating modes: continuous wave output, analog modulation, and digital modulation, which adapts to diverse application requirements from static spectral analysis to dynamic light control.

Features:

- Wide wavelength coverage and rich model options
- Balance between structural design, precision and reliability
- Flexible working mode adaptability
- Ultra-high stability laser output

Specifications

Common Parameter Specification Table

Parameter Item	Parameter Value
Spatial Pattern	TEM00
Beam Quality	1.2
Beam Asymmetry	0:1.2
RMS Noise	<0.2%
Peak Value Noise	<0.5%
Long-term Power Stability (8 hours, ± 3)	0.5%
Operating Voltage	DC-5V/3A
Polarization Ratio	Vertical Direction 50:1
Laser-drive Mode	Continuous Wave, Analog Modulation, Digital Modulation
Laser Safety Level	3B
ESD Protect	Level 4
Laser Head Bottom Plate Temperature	50
Case Dimension	704045mm
Operating Temperature	10 to 40
Storage Temperature	-20 to 60
Lifetime	10000hrs
Fiber Length (Standard Configuration)	1m (Customizable)
Connector Options	FC/PC, FC/APC, SMA905 (Optional)

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	Case dimension	Fiber Core Diameter	Max Output Power	Wavelength
VLFL-LS-405	70x40x45mm	3μm	80mW	405nm
VLFL-LS-450	70x40x45mm	3.5μm	25mW	450nm
VLFL-LS-488	70x40x45mm	3.5μm	25mW	488nm
VLFL-LS-505	70x40x45mm	3.5μm	35mW	505nm
VLFL-LS-520	70x40x45mm	3.5μm	40mW	520nm
VLFL-LS-638	70x40x45mm	4μm	100mW	638nm
VLFL-LS-660	70x40x45mm	4μm	40mW	660nm
VLFL-LS-685	70x40x45mm	4μm	20mW	685nm
VLFL-LS-785	70x40x45mm	5μm	75mW	785nm
VLFL-LS-808	70x40x45mm	5μm	40mW	808nm
VLFL-LS-830	70x40x45mm	5μm	70mW	830nm
VLFL-LS-850	70x40x45mm	5μm	70mW	850nm
VLFL-LS-905	70x40x45mm	5μm	70mW	905nm
VLFL-LS-940	70x40x45mm	5μm	70mW	940nm
VLFL-LS-980	70x40x45mm	6μm	8mW	980nm

 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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