VENUSLAB
OPTOELECTRONICS

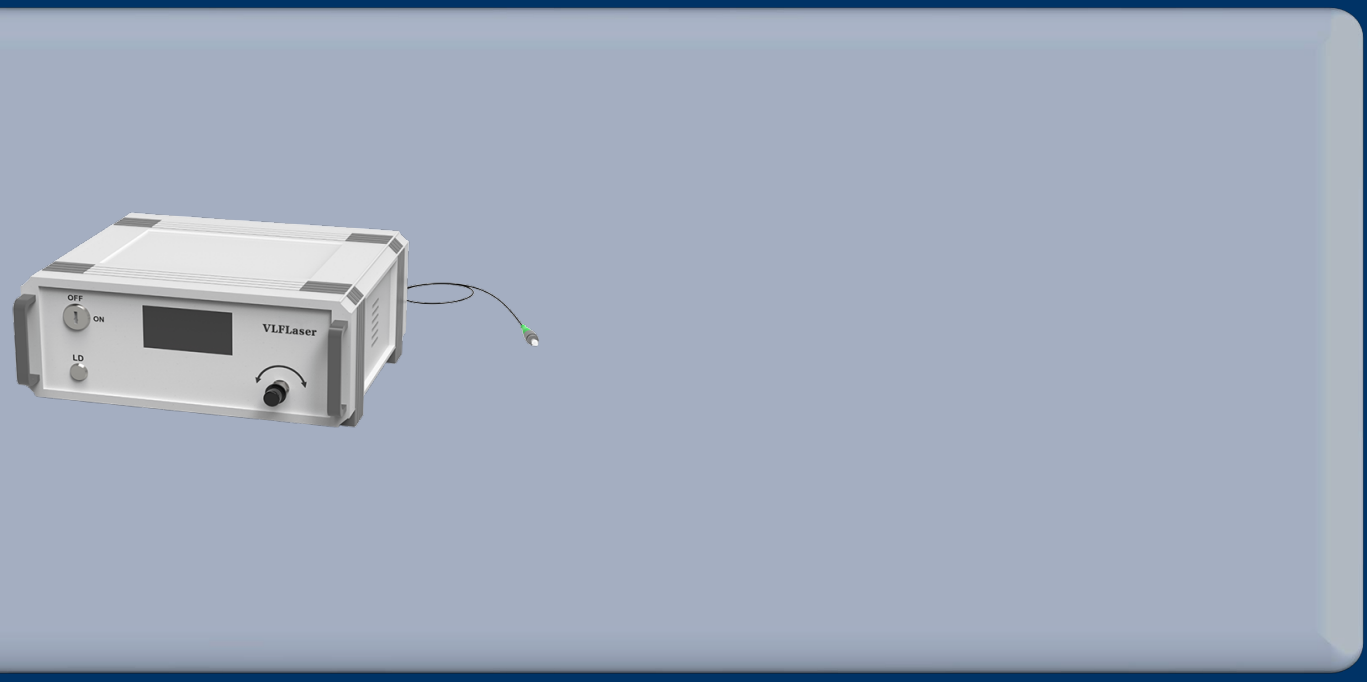
Precision
Meets
Simplicity

Laser Systems

VLFL-450 Series Fiber-Coupled Laser Systems

An integrated laser system that is "exclusive to the near-ultraviolet to blue light band, covers full power range (30~3500mW), and supports multi-scenario customization"

- 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

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VLFL-450 Series Fiber-Coupled Laser Systems

Overview

Introduction:

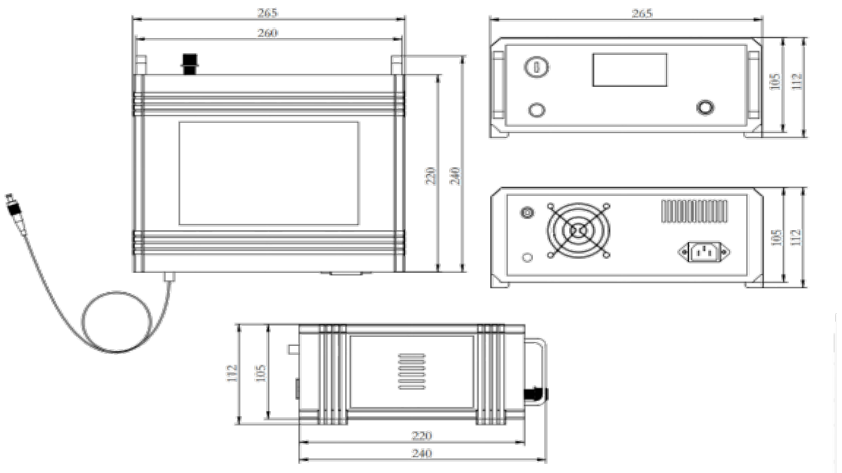
Developed by Venuslab, the near-ultraviolet to blue light band fiber-coupled laser system features a highly unified core architecture: it integrates a laser module, a dedicated modulation module, a high-precision driving power supply, and an air-cooled refrigeration unit. It is compatible with the A-1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

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 ands marter.