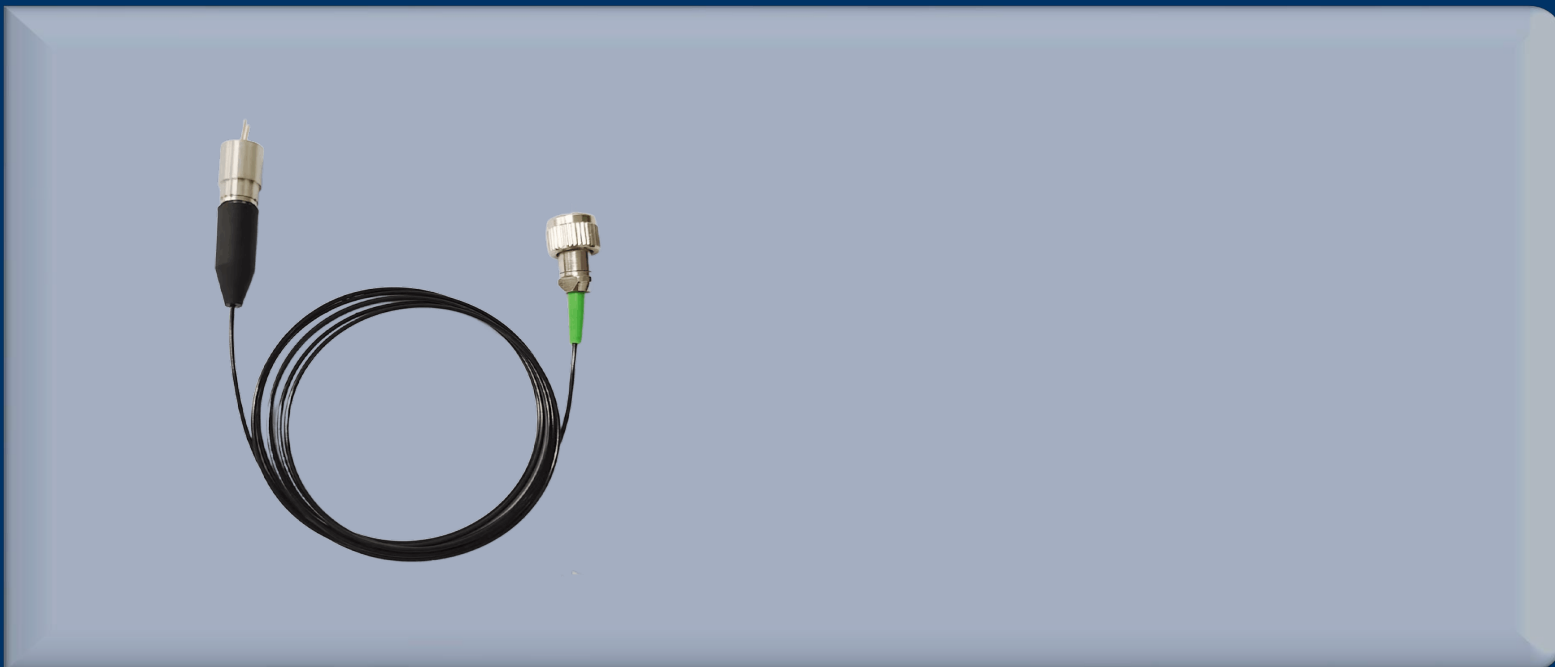


# Fiber-Coupled Laser Sources

## VL-PM Fiber-Coupled Laser Sources

Focusing on High precision, High stability, and Controllable polarization

- Stable, polarization-maintaining, for sensitive applications.
- High-precision optical performance, suitable for precision applications
- Strong compatibility and standardized design reduce supporting costs
- Strict safety and protection design ensures long-term reliable operation



One Platform Many Possibilities

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## Overview

### Relying on FP resonant cavity and multimode fiber coupling

The VLFL-PM series is centered around semiconductor laser diodes (LDs). All 21 models adopt the TO coaxial package dedicated to low-power LDs, featuring a compact structure and standardized installation. Optically, they uniformly employ integrated single-mode fiber-coupled output (equipped with a adhesive type self-focusing lens). The output laser conforms to a Gaussian spot distribution, and the fibers are all polarization-maintaining types, capable of stably maintaining the polarization state.

They have an extinction ratio of 16-18dB, a spectral width of 2.0-3.0nm, and a wavelength temperature coefficient of 0.3nm/, with strong consistency in optical performance.

The parameters cover wavelengths from 405-1064nm (near-ultraviolet to near-infrared) and continuous output powers from 5-100mW; the fiber core diameter is 3-9 $\mu$ m, the numerical aperture is 0.12, the length is  $\geq$ 1m, and it supports various connectors such as FC/APC and SMA905; electrically, it needs to be matched with a current source power supply, with an operating voltage of 1.55-8.0V, a threshold current of 12-100mA, and an operating current of 40-320mA. Some models are equipped with PD + pins for power monitoring.

## Specifications

**BGFL-PM Series Common Parameters Table**

Parameter Category	Specific Parameters
Basic Package Parameters	
Package Type	TO Package (Coaxial Package)
Package Dimension Unit	Millimeter (mm)
Core Device & Optical Output Parameters	
Core Device	Semiconductor Laser Diode (LD)
Optical Output Form	Integrated Single-Mode Fiber-Coupled Output (with conformal gradient-index lens)
Fiber Type	Polarization Maintaining Fiber (PM Fiber)
Laser Safety Class	Class 4
Wavelength Temperature Coefficient	0.3nm/
Common Fiber Parameters	
Numerical Aperture (NA)	0.12
Fiber Length	1m
Optional Fiber Connectors	FC/APC, FC/PC, SMA905, ST, 2.5 Ferrule
Common Electrical Requirements	
Power Supply Type	Current Source Power Supply
Number of Pins	3 Pins (some models include PD+ pin, but the basic power supply pin logic is consistent)
Common Safety & Usage Requirements	
Electrostatic Sensitivity	Electrostatic Sensitive Device (ESD)
Temperature Usage Requirement	Adequate Heat Dissipation or Cooling Required
Fiber Usage Limit	Bending Diameter > 300 $\times$ Fiber Core Diameter
Core Component Protection	No Damage to Emitting Surface (Cavity Surface); Prevent Core Contamination and Mechanical Damage
Power Usage Requirement	Operation Under Rated Current and Rated Power

## 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	Central Wavelength (Range)	Fiber Core Diameter	Continuous Output Power	Extinction Ratio
VLFL-405-PM-FP-80	400-410nm	3µm	80mW	18dB
VLFL-450-PM-FP-30	445-455nm	3.5µm	30mW	16dB
VLFL-505-PM-FP-30	500-510nm	3.5µm	30mW	16dB
VLFL-488-PM-FP-30	485-491nm	3.5µm	30mW	16dB

 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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