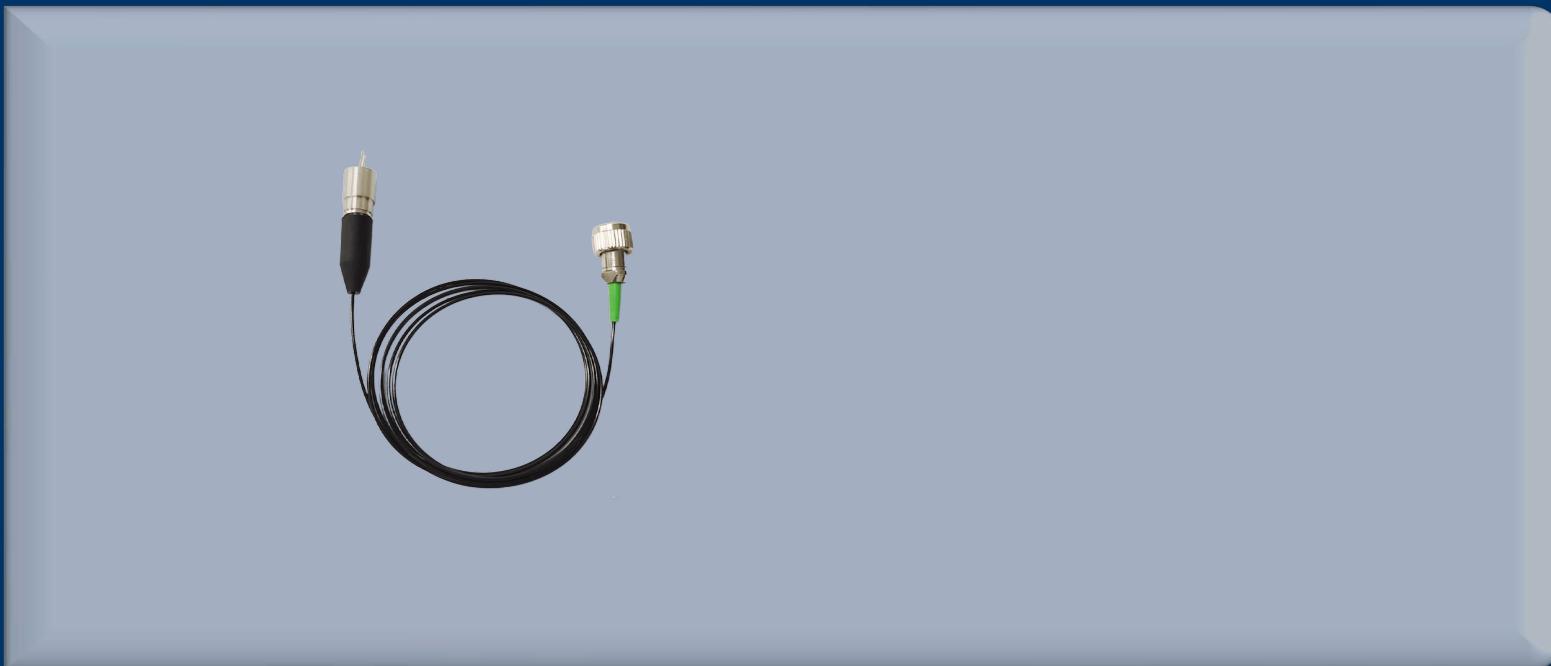


Fiber-Coupled Laser Sources

VL-PM Fiber-Coupled Laser Sources

Focusing on High precision, High stability, and Controllable polarization

- High stability and polarization-maintaining characteristics, suitable for polarization-sensitive scenarios
- 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



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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/°C, 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 3-9μm, the numerical aperture is 0.12, the length is 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/°C
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×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

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.

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