

# Optical Filter

## Linear Variable Neutral Density Filter

Continuous Intensity Control via Sliding Adjustment

- Linear Variation
- High Linearity
- Broadband Coating
- Standard Size



One Platform Many Possibilities

Contact Us [sales@venuslabtech.com](mailto:sales@venuslabtech.com)

Get a Quote



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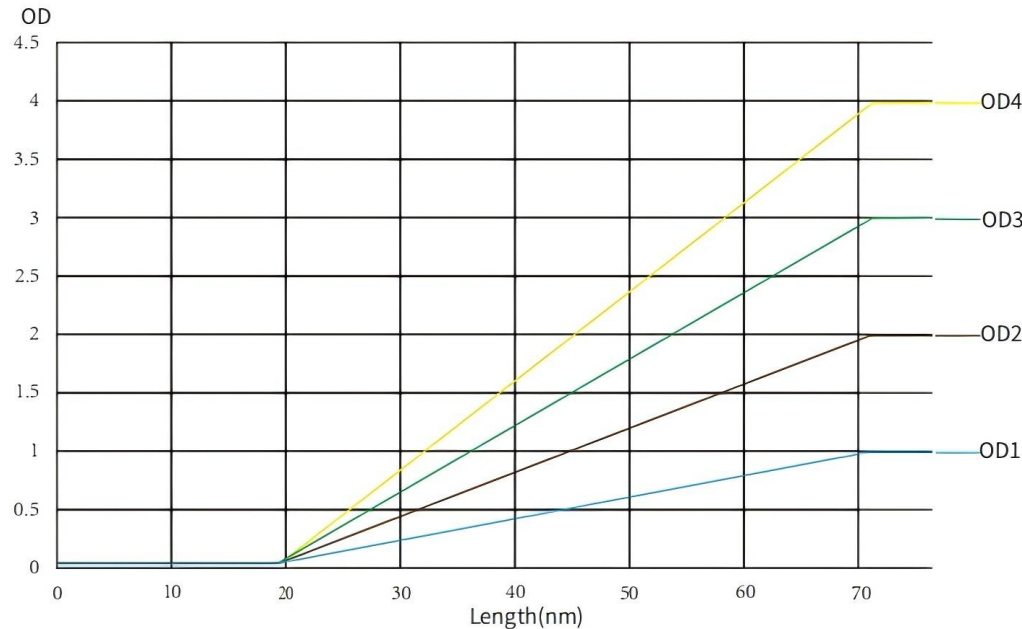
## Overview

### Analog Precision: Tuning Light Intensity with Linear Gradients

The VenusLab VLLND Series is designed to overcome the limitations of "discrete attenuation." In many experiments, fixed optical density filters (e.g., OD0.1, OD0.5) cannot provide the exact transmission required. The VLLND utilizes linear gradient coating technology to distribute optical density across a **76.2mm** length.

The beam's position determines the attenuation level, making intensity adjustment as intuitive as using a "sliding rheostat." With a surface quality of **80-50** and rigorous deviation testing ( $\pm 5\%$ ) at **632.8nm**, this series ensures research-grade reliability.

### Linear Gradient Performance Curves



## Qualification

### Linear Variable Filter Technical Specifications

Technical Parameter	Specification Data
Filter Type	Linear Variable Neutral Density
Wavelength Range	400 - 1100 nm (Recommended: 400-700nm)
Standard Deviation	$\pm 5\%$
Linearity Deviation	$\pm 5\%$
Surface Quality	80-50 Scratch-Dig
Design Wavelength	632.8 nm

## Selection Chart

### VLLND Series Ordering Information & Model List

Model	Optical Density (OD)	Wavelength (nm)	Size (mm)	Tolerance
VLLND-7625	0.8 - 2.0	400-1100	76.2 * 25.4 * 1.6	$\pm 5\%$

## 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	Size (mm)	Tolerance	Optical Density (OD)	Wavelength (nm)
VLLND-7625	76.2 * 25.4 * 1.6	±5%	0.8 - 2.0	400-1100

 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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