VENUSLAB
OPTOELECTRONICS

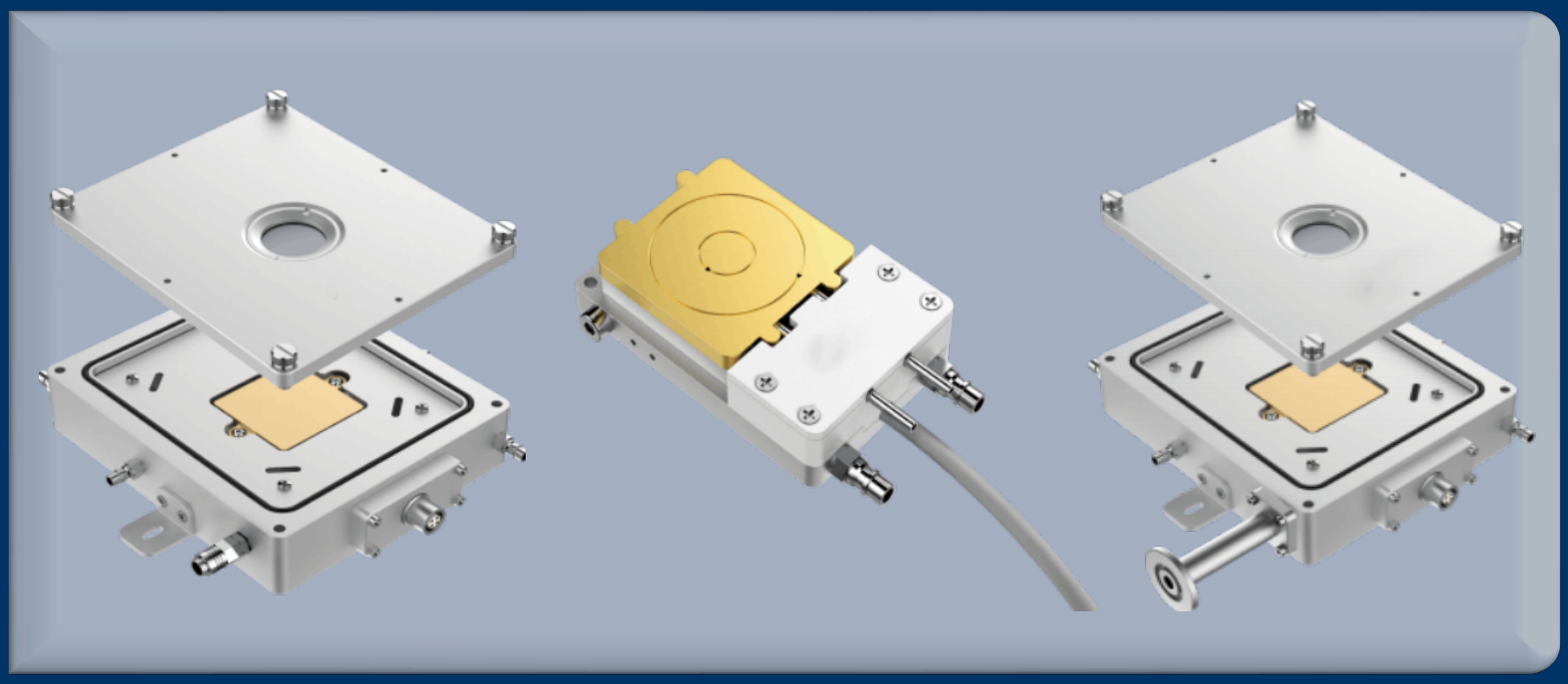
Precision Meets Simplicity

Optical

PeltierThermo Stage

Precise temp control, consistent optics; lightweight, versatile.

- Lightweight structural design
- Convenient sample operation
- Flexible adaptation to multiple scenarios
- Strong adaptability of temperature control rate



One Platform Many Possibilities

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Get a Quote

Get Expert Advice
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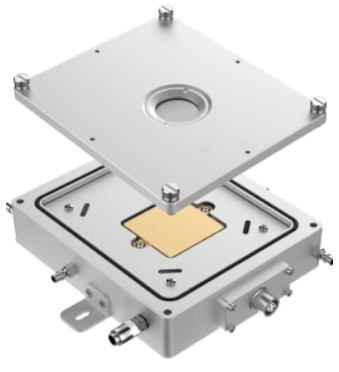
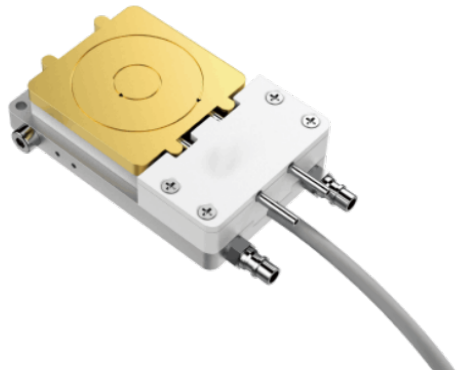
www.venuslabtech.com

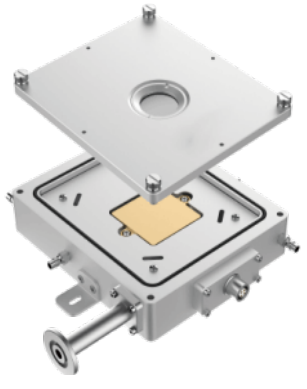
PeltierThermo Stage



VLO-25-120



VLO-25-120A



VLO-25-120V

Overview

Product introduction of VenusLab Peltier Heating and Cooling Stage:
VenusLab Peltier thermal stage adopts TEC as the core refrigeration technology, without the need for liquid nitrogen, and has both cooling and heating functions. It has a temperature range of -25℃~120℃, a stability of ±0.1℃, and supports multi-mode temperature control. The sample stage includes a φ2mm light-transmitting hole for reflection/transmission. The JGS2 quartz window is detachable and equipped with an air-blowing bracket to prevent frost. The body is thin and light, suitable for optical instruments. The screw-on upper cover facilitates sampling. Some models support XY axis ±6mm displacement, which can meet the needs of variable temperature optical testing in multiple fields such as biophotonics and semiconductor detection.

Specifications

Parameter Item	Parameter Value
Core Temperature Control Technology	Peltier Effect (TEC) cooling, with both cooling and heating functions
Temperature Stability	±0.1°C
Temperature Control Mode	Multi-mode temperature control (fixed-point, slope, programmed segment)
Temperature Control Rate	Maximum heating rate 30°C/min, maximum cooling rate 30°C/min
Optical Path Support	Reflection/Transmission (with φ2mm light-transmitting hole)
Window Configuration	JGS2 quartz glass (transmission band 220nm~2500nm, detachable and replaceable manually), equipped with air-blowing bracket
Basic Sample Stage Feature	Copper material, size 40mm×40mm

PeltierThermo Stage

Application

Designed for precision microscopy, the **PeltierThermo Stage** enables in-situ observation of microstructures under controlled thermal conditions (-25°C to 120°C).

• **Materials Science:** Investigation of phase transitions, melting points, and crystallization behaviors in polymers, liquid crystals, and phase change materials (PCMs).

• **Bio-Pharmaceuticals:** Drug polymorph screening, thermal stability testing, and observation of biological samples at constant physiological temperatures.

• **Spectroscopic Analysis:** Ideal for variable-temperature Raman and FTIR microscopy, supported by high-transmission quartz windows.

• **Microelectronics:** Thermal cycling and performance characterization of micro-sensors and semiconductor devices.

Serivce & 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	Overall Dimensions (L×W×H)	Net Weight	Sample Stage (Material/ Size)	Temperature Range
VLO-25-120A	74mm×47mm×18mm	0.2kg	Copper/40mm×40mm	-25°C~120°C
VLO-25-120	150mm×150mm×36mm	0.6kg	Copper/40mm×40mm	-25°C~120°C
VLO-25-120V	150mm×150mm×36mm	0.7kg	Copper/40mm×40mm	-25°C~120°C

📩 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 and smarter.