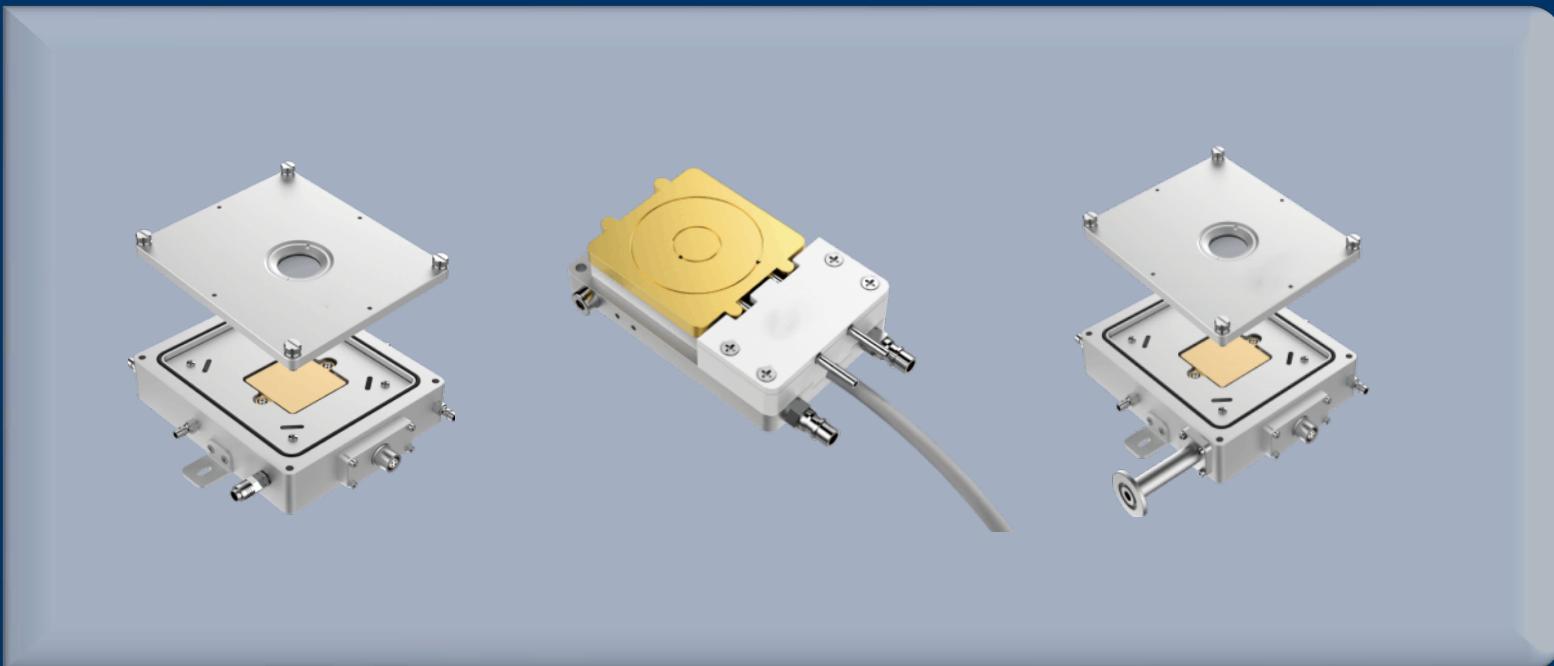


Optical Peltier Thermo Stage

The core temperature control methods are unified, the basic optical adaptations are consistent, and the temperature control accuracy is stable. Lightweight structural design Convenient sample operation Flexible adaptation to multiple scenarios Strong adaptability of temperature control rate

- 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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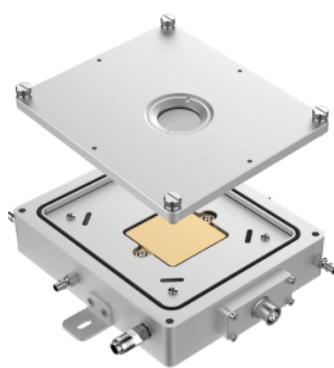
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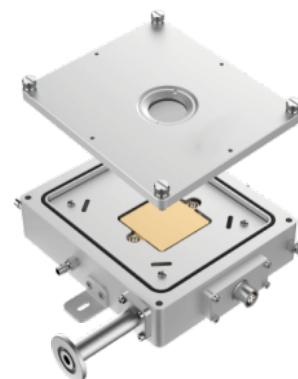
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VLO-25-120



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 $-25 \sim 120^{\circ}\text{C}$, a stability of $\pm 0.1^{\circ}\text{C}$, and supports multi-mode temperature control. The sample stage includes a $\phi 2\text{mm}$ 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 $\pm 6\text{mm}$ 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	$\pm 0.1^{\circ}\text{C}$
Temperature Control Mode	Multi-mode temperature control (fixed-point, slope, programmed segment)
Temperature Control Rate	Maximum heating rate $30^{\circ}\text{C}/\text{min}$, maximum cooling rate $30^{\circ}\text{C}/\text{min}$
Optical Path Support	Reflection/Transmission (with $\phi 2\text{mm}$ light-transmitting hole)
Window Configuration	JGS2 quartz glass (transmission band $220\text{nm}\sim 2500\text{nm}$, detachable and replaceable manually), equipped with air-blowing bracket
Basic Sample Stage Feature	Copper material, size $40\text{mm}\times 40\text{mm}$

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.



Explore Series

Model	Overall Dimensions (LxWxH)	Net Weight	Sample Stage (Material/ Size)	Temperature Range
VLO-25-120A	74mmx47mmx18mm	0.2kg	Copper/40mmx40mm	-25°C~120°C
VLO-25-120	150mmx150mmx36mm	0.6kg	Copper/40mmx40mm	-25°C~120°C
VLO-25-120V	150mmx150mmx36mm	0.7kg	Copper/40mmx40mm	-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.

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