TECHNICAL DATA SHEET

Infrared Focusing Furnace AIH1700

InSitu Pro™ infrared focusing furnace · RT to 1700 °C · up to 30 °C/s · vacuum/atmosphere chamber

AIH1700 — ultra-high-temperature infrared focusing furnace

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SECTION I

Product Description

InSitu Pro™ AIH1700 is the infrared focusing furnace at the top of the InSitu Pro™ family, designed for studying the microstructural evolution of materials at high temperature — real-time, in-situ, high-resolution observation and analysis of melting, solidification, crystallization and other phase transitions up to 1700 ℃. The infrared focusing structure delivers heating at up to 30 ℃ per second with a controllable cooling rate, holding ±0.1 ℃; the controller and software support fixed-point holds, ramp-rate control, and multi-segment programmable profiles.

An ellipsoidal reflector concentrates the infrared source at one focus onto the heating zone at the other. A platinum φ10 mm stage carries the sample, viewed in reflection or transmission through a φ7 mm JGS2 quartz window (220–2500 nm, manually removable), with a 17 mm window-to-stage distance. The chamber is specified for vacuum or atmosphere operation — a vacuum system is available as an option — and the core heat-source module is designed for quick removal and replacement, improving maintenance efficiency. The intended operating atmosphere and pumping configuration are confirmed at quotation.

The AIH1700 belongs to the InSitu Pro™ optical family and its controller ecosystem, and can be configured for compatible optical microscopy and Raman systems. Host-computer software provides temperature setting and data acquisition, with LabVIEW and C# SDKs for customized programming; it is supplied by quotation, with configuration confirmed by our engineers for your optics.

SECTION II

Specifications

InSitu Pro™ Infrared Focusing Furnace	
Model #	**AIH1700**
SKU #	EIAH1700
Heating Method	Infrared heating
Temperature Range	RT ~ 1700 ℃
Temperature Stability	±0.1 ℃
Temperature Control Rate	Max heating 30 ℃/s · cooling rate controllable
Sample Stage	Platinum · φ10 mm
Optical Path	Reflection / Transmission
Window Size	φ7 mm
Window Material	JGS2 quartz glass (220–2500 nm), manually removable and replaceable
Window-to-Stage Distance	17 mm
Chamber	Vacuum / Atmosphere
Dimensions	140 × 160 × 265 mm
Net Weight	12.5 kg

SECTION III

Application Fields

- Temperature-dependent optical-property studies
- Raman & spectroscopic measurements
- Materials science & ceramics research
- Nanomaterials characterization
- High-temperature optical microscopy
- Melting, solidification & crystallization studies
- Semiconductor & optoelectronic research
- Mineral & geological studies

SECTION IV

Configuration & Ordering

The AIH1700 runs on its matched temperature controller, water-circulation system, and PC control software, plus connection cables, tubing and accessories. Options include adapter plates, custom water circulators, vacuum systems, host PCs, and custom control software. Software provides temperature setting, program editing, and data acquisition on the same host-computer platform as the rest of the InSitu Pro™ optical family.

The AIH1700 is supplied by quotation: request via the product page or the InSitu Pro™ Stage Selector at www.acsmaterial.com. Our engineers confirm the configuration for your optics and reply with pricing and lead time.

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