ACS Material Equipment Series

InSitu Pro™ ACH600S

Contact Information:

ACS Material, LLC

Address: 959 E Walnut St., Suite 100

Pasadena, CA 91106, USA

Phone: (866) 227-0656

Fax: (781) 518-0284

E-Mail: contact@acsmaterial.com

Revision: 070325

I. Product Composition

1) Main Unit

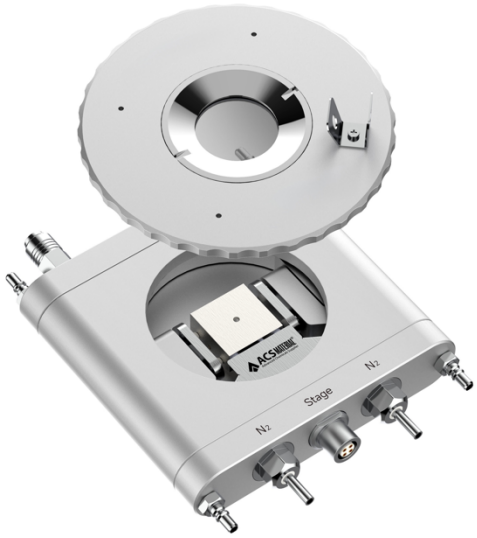

Photo of InSitu Pro™ ACH600S

2) Product Features

ACH600S is a product designed for studying the temperature-dependent optical performance of samples. It can characterize the changes in the optical properties of samples with temperature. The product uses liquid nitrogen cooling and resistive heating to achieve precise temperature control within the range of -190 to 600℃. It can be integrated with other optical equipment (such as microscopes and Raman spectrometers) for in-situ temperature-variable testing. The product needs to be used with a temperature controller and an optional cooling controller. The accompanying temperature control software on the host computer facilitates temperature setting and data acquisition. The provided Labview Vis/C# SDK allows customers to perform customized programming.

3) Product Specifications

<table>
<tr><td colspan="6">InSitu Pro™ ACH600S</td></tr>
<tr><td>SKU#</td><td colspan="5">EIPCH001</td></tr>
<tr><td rowspan="7">Temperature Control Module</td><td>Cooling and heating method</td><td>Liquid nitrogen cooling, resistive heating</td><td rowspan="7">Structural Properties</td><td>Sample stage size</td><td>23×23mm *</td></tr>
<tr><td>Temperature control range</td><td>-190~600 ℃*</td><td>Sample stage material</td><td>Silver *</td></tr>
<tr><td>Temperature stability</td><td>±0.1℃ (-190~-120 ℃; ± 0.3℃)</td><td>Overall dimensions</td><td>91×97×24mm *</td></tr>
<tr><td>Temperature resolution</td><td>0.1℃</td><td>Sample chamber height</td><td>4mm *</td></tr>
<tr><td>Heating and cooling rate</td><td>0~30℃ /min (Programmable, point control or segmented control), up to 150℃/min</td><td>Chamber</td><td>Airtight * (upgradeable to vacuum)</td></tr>
<tr><td>Temperature control method</td><td>PID</td><td>Casing cooling</td><td>Circulating water</td></tr>
<tr><td rowspan="8">Optical Properties</td><td>Temperature sensor</td><td>PT100</td><td rowspan="3">Basic Configuration</td><td colspan="2" rowspan="3">Includes 1 main unit, 1 temperature controller, 1 cooling controller (low-temperature configuration), 1 liquid nitrogen tank (low-temperature configuration), 1 water circulation system, 1 temperature control software</td></tr>
<tr><td>Optical path</td><td>Transmission light path * (optional reflection light path)</td></tr>
<tr><td>Window material</td><td>Quartz glass (manually removable and replaceable) *</td></tr>
<tr><td>Window dimensions</td><td>Φ25mm *</td><td rowspan="4">Optional Configuration</td><td colspan="2" rowspan="4">Computer System / Installation Bracket / Vacuum System / Customized Temperature Control Software</td></tr>
<tr><td>Objective working distance</td><td>5mm *</td></tr>
<tr><td>Light transmission aperture</td><td>Default light transmission aperture * (optional without aperture)</td></tr>
<tr><td>Window defrosting</td><td>Airflow defrosting at sub-zero temperatures</td></tr>
<tr><td>Remarks</td><td colspan="5">All parameters above are default. Items marked with * are customizable. When upgraded to vacuum, the temperature control range is -190 to 400℃</td></tr>
</table>

Disclaimer: ACS Material, LLC believes that the information in this Technical Data Sheet is accurate and represents the best and most current information available to us. ACS Material makes no representations or warranties either express or implied, regarding the suitability of the material for any purpose or the accuracy of the information contained within this document. Accordingly, ACS Material will not be responsible for damages resulting from use of or reliance upon this information.