

HEATING AND COOLING STAGES

TS64-STC200 MICROSCOPE THERMAL STAGE SYSTEM

Features:

- Up to 3.5"X3.5" Sample Size
- Fast Heating and Cooling rate
- Variable Sample Chamber Height
- Programmable Precision Temperature Control from -20 °C to 90 °C
- Optional IEEE488 Communication Port
- RS232 Communication Port Included
- Peltier Cooling and Heating
- Large Viewing Window
- Free Labview Driver for IEEE488
- Windows 95/98/2000/NT Based Software for RS232



Description

The TS64-STC200 thermal stage system utilizes Peltier as both heating and cooling element. Besides the large sample chamber and viewing aperture, the biggest advantage for this system is that there is no need for liquid nitrogen for cooling to as low as -20°C. Therefore the stage can be rotated on the polarized microscope even as the sample is at -20°C.

The STC200 controller for the stage utilizes linearly variable DC power supply for eliminate the electrical noise and elongate the lifetime of the Peltier Device.

All of the windows on the TS64 stage are removable and exchangeable allowing the TS64 to be used for X-ray diffraction, FTIR, and other experiments requiring beam access to the sample. The TS64 stage can also be mounted vertically for applications requiring horizontal beam access to the sample chamber.

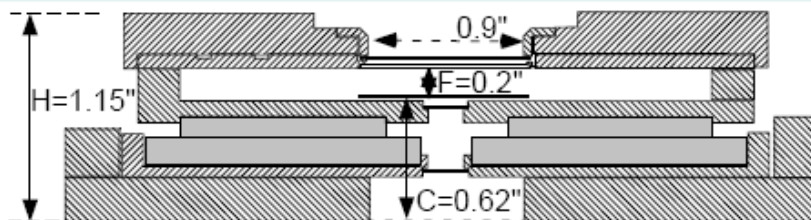
The interior of the TS64 is large enough to accommodate 3.5"X3.5" sample.

Applications

Flexible design and easy-to-use features make hot stage systems ideal for use in:

- | | | |
|------------------------------|--------------------|--------------|
| • Optical Thermal Microscopy | • Food Science | • Medicine |
| • Polymers | • Material Science | • FTIR |
| • Liquid Crystals | • Semiconductors | • Biophysics |
| • Forensics | • Microbiology | • Telecom |

Cross Section View



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Technical Specification

Temperature Control Sensor	Platinum RTD
Control Method	PID, variable DC power output
Temperature Range	-20°C to 90°C
Temperature Accuracy	±0.1°C at 37°C
Temperature Stability	±0.1°C at 37°C
Minimum Heating and Cooling Rate	±0.1°C/Hour
Maximum Heating Rate	+30°C/Min. at 37°C
Maximum Cooling Rate	-30°C/Min. at 37°C
Minimum Working Distance	6.5 mm for only double glass windows on the cover
Minimum Condenser Distance	17 mm
Sample Chamber Height	2.5mm, increasable to 11.5mm
Sample Area	3.5"x3.5"
Sample View Aperture	0.2" (5 mm) for transmission mode 0.8" (20mm) for reflected mode

Ordering information

Part Number	Description
TS64-STC21A	TS64 thermal microscope stage with one STC200 controller configured for this stage. System has a 2-year warranty (TS64-C with only a 3-month warranty). Input voltage is 115V. The system includes RS232, one WP115V, one SP12-TS64 spacer, and one TS64-C.
TS64-STC21U	TS64 thermal microscope stage with one STC200 controller configured for this stage. System has a 2-year warranty (TS64-C with only a 3-month warranty). Input voltage is 220V. The system includes RS232, one WP230V, one SP12-TS64 spacer, and one TS64-C.
TS64-C	Thermo-electric module for TS64. Replacement part. Instec, Inc. carries a 3-month warranty on TS64-C.
IEEE-STC200	The IEEE488 port for STC200 with sample LabView driver.
SP12-TS64	3 mm thick spacer to increase TS64 sample chamber



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