



# HFC-100™

HEAT FLUX CONTROLLER



The Heat Flux Controller™ is a high heat flux chip simulator capable of measuring and controlling the amount of heat in a resistive element. The HFC-100™ comes with a chip simulator capable of dissipating 1k/cm<sup>2</sup>. The design of the heater block insures minimal heat loss to the ambient, hence, a more accurate thermal resistance determination of either heat sinks or cold plates.

This system features ATS proprietary fluxSTAGE™, a LabView™ application, which automates the use of the system and allows the user to choose multiple heat loads at a specific dwell time. The program calculates the thermal resistance of the cold plate for desired cooling of the die and measures the simulated junctions temperature.



Illustration of the HFC-100 Heat Flux Controller with simulated chip capable of dissipating 1 kW of heat over 1 cm<sup>2</sup>

**OVERALL DIMENSIONS (L X W X H)**  
55.9 cm x 42.5 cm x 8.8 cm  
(22" x 16.7" x 3.5")

**ACCURACY**  
+/- 1%

**NUMBER OF SENSOR PORTS**  
8

**OUTPUT POWER**  
Up to 1 kW

**OUTPUT VOLTAGE**  
Up to 40 VDC

**INPUT POWER**  
115 VAC

**PC CONNECTION**  
USB

**SOFTWARE**  
fluxSTAGE™

**WEIGHT**  
10 kg (20 lbs.)

**FEATURES:**

- » **Automated Calculation**  
Automatically calculates the total thermal resistance of heat sink, cold plate or cooling device
- » **High Heat Flux Chip Simulator**  
Simulated chip is capable of dissipating 1 kW of over 1 cm<sup>2</sup>
- » **Versatile Measurement**  
Capable of transient steady state and transient measurements
- » **Up to 8 Sensors**  
Can accommodate up to eight thermocouple sensors for precise temperature measurement
- » **Dynamic Control**  
Features dynamic control of the simulated chip's power dissipation
- » **Dynamic Measurement**  
Dynamically measures the resistance of the heating element for accurate dissipation calculation
- » **fluxSTAGE™ Software**  
Features ATS' fluxSTAGE™ application which automates the use of the system and allows the user to choose multiple heat loads at a specific dwell time
- » **Automatic Shut-off**  
Automatically shuts if the heater temperature rises above the user defined protocol
- » **Free Lifetime Tech Support**

For further technical information, please contact Advanced Thermal Solutions, Inc. at **1-781-769-2800** or **www.qats.com**

