Ironwood ELECTRONICS

Imperium Thermal Control System

Developed specifically for low power applications, Ironwood Electronics' IMPERIUM Thermal Control System integrates seamlessly with Ironwood's test sockets and can be easily adapted to all sockets, providing exceptional thermal control in demanding applications. Building upon Ironwood's leadership and expertise in high performance sockets, Imperium provides a smaller footprint, less noise, greater flexibility, and lower cost when compared to typically oversized systems for bench-top use.

FEATURES AND BENEFITS

Benchtop - Small Size

Imperium is intended for low power (<10 W) temperature control from -55°C to +150°C, resulting in a compact bench-top unit with low acoustic noise. The universal 115-250 volt power requirement and small size, just 410 x 282 x 150 mm (11 x 6 x 16 in) and only 8.7 kg (19 lb), makes it easy to move and use anywhere in the lab.

Unique Umbilical/ Test Head

The detachable Thermal Head contains internal pneumatics for precise force control from 0-80 kg, perfect for use with high performance, but more force sensitive, elastomer contacts, while the quick disconnect makes it easy to swap heads for different package sizes or transfer between sites. Utilizes a highly flexibly abrasion resistant umbilical for easy workbench management.

Purge holes for dry air

Digitally Controlled Pressure to DUT

Seal Ring and Dry Air to prevent frost

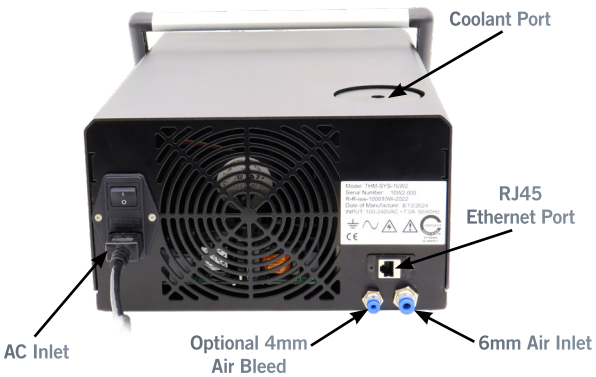
Ideal for use with Ironwood test sockets

Frost-Free Operation

Integrates with all high performance test sockets, creating a seal between the test head and socket body for frost free operation. Optional shrouds are available to extend the frost free zone outside the socket area.

Excellent Thermal Control

Temperature Control and Accuracy is within +/-0.2°C.



SPECIFICATIONS

Temperature Range	-55°C to 150°C
Cooling Power	10 W @ -40°C
Temperature Stability	0.2°C
Temperature Accuracy	0.2°C
Temperature Sensor	NTC Thermistor
Transition Rates	Up to 80°C/min
Remote Interface	Serial -232 over USB-B
Fully Automated DUT Pressure Force	System controlled up to 80 kgf
DUT Dimensions	1.5 x 1.5 mm to 35 x 35 mm (standard head)
System Requirements	
Electrical	115 - 250 Vac, 6 A max, Single Phase
Ambient Temperature	0°C to 30°C
Ambient Humidity	<90%
Air Compressor	0.5 CFM Min @ 90 PSI Min - 130 PSI Max -55°C dew point (Dry air to avoid condensation)
Dry Air Input	6 mm OD Standard Tube
Mechanical Dimensions	
Chiller/Controller Dimensions	410(D) x 282(W) x 150(H) mm 16.2 x 11.1 x 5.9 in
Weight (System) (Head)	(8.7 kg) (1.4 kg)
Thermal Head (mm) (Current Design)	70 x 70 x 60 mm
Thermal Head Hose Length	1 - 2.5 m, Some thermal loss at lengths > 1.5m
Sound Level	45-55 dBA avg (64dBA max)

CE/CB Certified