

High Low Temperature Test Chamber For Battery Cells Automotive Components And Electronic Products

Item Number: DA16



Introduction

High low temperature test chamber for battery cells automotive components and electronic products with 225 L capacity precise 40°C to 150°C simulation stable reliable environmental testing performance for research development qualification and materials reliability programs across demanding applications

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Application	Description	Key Benefit
Battery Cell Reliability Testing	Expose individual cells and related battery components to controlled temperatures between -40°C and +150°C to assess thermal response and environmental durability.	Supports repeatable screening and qualification of cell performance under defined temperature conditions.
Automotive Component Validation	Test automotive parts, assemblies, and supporting materials under high-temperature and low-temperature environments representative of demanding service conditions.	Provides controlled thermal evidence for design verification and reliability evaluation.
Electrical and Electronic Product Testing	Evaluate electronic products, electrical components, and assemblies for response to temperature extremes during development or quality programs.	Helps identify temperature-related weaknesses before field deployment or production release.
Materials Reliability Research	Study the behavior of materials and manufactured parts during temperature exposure, stabilization, and controlled thermal transitions.	Creates a consistent test environment for comparative material and component analysis.
Environmental Simulation for Product Development	Integrate high- and low-temperature exposure into engineering test plans for prototypes, subassemblies, and production-intent products.	Consolidates broad thermal test requirements in one chamber with a wide operating range.
Component and Part Qualification	Conduct defined thermal conditioning and reliability tests on parts, components, and other products requiring environmental simulation.	Supports documented qualification workflows with specified stability, deviation, and gradient values.
Academic and Laboratory Research	Use the chamber for controlled thermal experiments involving cells, electronic products, materials, and small components.	Offers measurable temperature control characteristics for repeatable research procedures.

Parameter	Specification
Product Item Number	DA16
Equipment Type	High low temperature test chamber
Effective Volume	225 L
Applicable Test Articles	Various battery cells, automotive components, electrical and electronic products, other products, parts, and materials

Dimension Category	Width	Height	Depth
Internal Chamber Dimensions	500 mm	750 mm	600 mm
External Dimensions	700 mm	1780 mm	1420 mm
External Dimension Note	colspan	colspan	Based on actual equipment configuration

Parameter	Specification
Environmental Temperature	5~35°C
Environmental Humidity	10~85%RH
Specimen Weight	None specified
Specimen Heat Generation	None specified
Temperature Indication Resolution	0.01°C
Temperature Range	-40°C to +150°C
Temperature Fluctuation	±0.5°C
Temperature Deviation	≤±2°C after temperature stabilization; at any time, the difference between the highest or lowest temperature and the nominal temperature
Temperature Gradient	≤±2.0°C after temperature stabilization; maximum difference between the average temperatures at any two points in the chamber over any time interval. The newer standard uses temperature gradient in place of the previous temperature uniformity terminology.
Heating Rate	1~3°C/minute, nonlinear, no-load condition
Cooling Rate	1°C/minute, nonlinear, no-load condition

Parameter	Specification
Equipment Noise	≤70 dB(A level)
Equipment Weight	450 kg
Power Supply	AC 380 V, 50 Hz, three-phase