

Lithium Battery Test System 7530

MiNT 7530 Lithium Battery Test System is designed for complete testing of medium power energy cells, such as primary and secondary lithium cells.

The fully independent Tester-per-Channel architecture and highly modularized system allows the user to configure the system from R & D to all phases of manufacturing, including battery technology development, characterization, and testing. System expandability accommodates small scale to large scale manufacturing with ease.

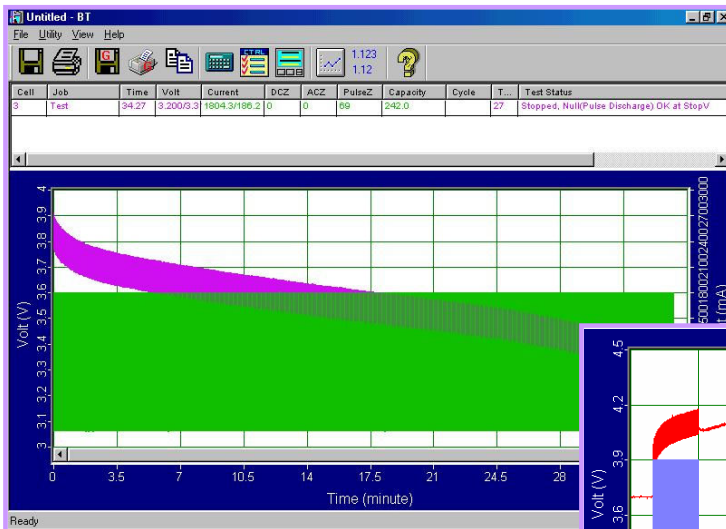
The high degree of accuracy, flexible test flow programming, and powerful measurement data analysis tools make the MiNT 7530 the ideal tool for lithium battery characterization, quality control (QC), quality assurance (QA), and reliability certification.

Features:

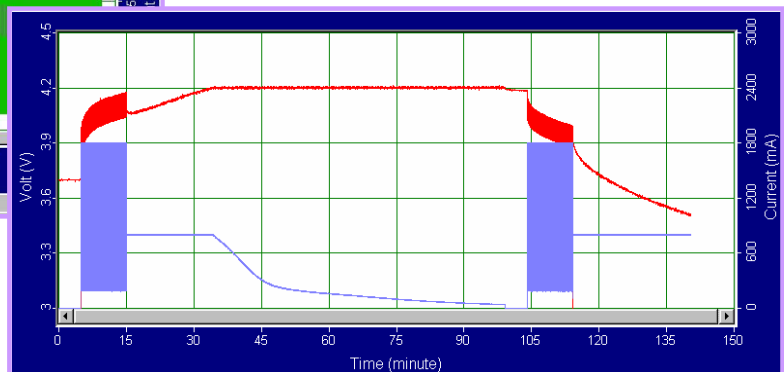
- Fully independent Tester-per-Channel architecture
- Flexible test flow - any test (e.g., internal resistance, pulse, etc.) can be performed as frequently as needed, at any time and at any sequence in the test flow.
- Independent Cell measurement
- Pulsed tests
- Medium power capability for up to 3A charging/3A discharging and up to 5V cell test
- Extensive data acquisition and data analysis capabilities
- Support cycle life and aging profile analysis

Per Channel Test Functions:

- ◆ Constant Current Constant Voltage (CCCV) charging and discharging with smooth programmable CC to CV mode transition
- ◆ Pulsed charging and discharging
- ◆ AC, DC, or pulsed internal resistance measurement
- ◆ GSM, CDMA, CDMA2 pulsed testing
- ◆ Voltage measurement per cell
- ◆ Temperature measurement per cell
- ◆ OCV
- ◆ Individual cell test control and datalogging



Pulse Discharge Runtime Display



Example of a OCV, Charge IR, Pulse Charge, CCCV, Discharge IR, Pulse Discharge, and CC Discharge Test Flow Runtime Display

Specifications¹:

Series 7530 Lithium Battery Test System

Battery Test Control

Operating Modes:	CC, CV, CP, CR, CW, 1KHz, Pulse
Charging Voltage:	0V to 5V
Discharging Voltage:	1V to 5V
Voltage Accuracy:	±3mV
Current Range:	Charge 3A Discharge 3A
Current Accuracy:	±3mA
Pulse Range:	100µs to 5s; GSM, CDMA, CDMA2
Pulse Resolution:	100µs
Pulse Rise Time:	100µs
Charge/Discharge Switching Time:	2ms

Battery Measurement

Cell Voltage:	0 to 5V
Cell Voltage Accuracy:	±2mV
Current Range:	3A
Current Accuracy:	±3mA
Temperature:	0°C to 100°C
Internal Resistance:	4 types - 1KHz AC, DC, and Pulse
Internal Resistance Accuracy:	Accuracy 1% ± 1mΩ
Data Acquisition Time:	10ms and up
Cycle Life:	> 10,000 cycles

Software

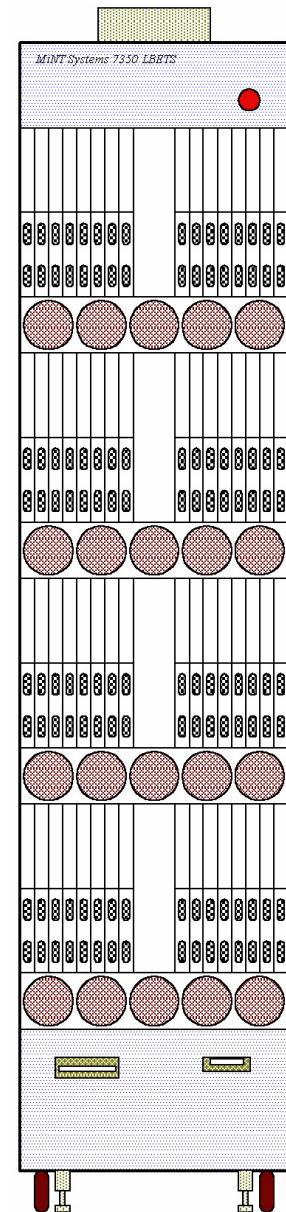
MiNT LBETS 7530 application software:	MS Windows platform, runtime graphics display, test flow control, data analysis tools
Test Steps:	256 steps with >1,000,000 test block loops
Test End Criteria:	Voltage, Current, Time (dt), Temperature, AH, WH, dV/dt, and other options, e.g. Pressure
Data Recording Criteria:	Time (dt), dV, dI, dWH, dT, dP, dAH

General

System Configuration:	128 channels per 19-inch rack
Minimum Configuration:	128 channels
Maximum Configuration:	>16,000 channels
Test Fixture:	4-wire Kelvin connection
AC Power Requirement:	208V, ±10%, three phase 47Hz to 65Hz, 3.5KW every 128 channels
Humidity:	20% to 80% RH, non-condensing
Operating Temperature:	5°C to 30°C

Options

Cell Pressure Sensor:	User-specified Psi range
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MiNT Systems 7530 LBETS III Lithium Battery Test System for Engineering and Manufacturing use

MiNT Systems®

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¹ Preliminary specifications subject to change without notice.