

MiNT 7526 Lithium Battery Test System is designed for complete high power multi-cell lithium cell engineering and production use.

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 for multi-cell Lithium batteries. System expandability accommodates stages in manufacturing from small scale to large scale with ease.

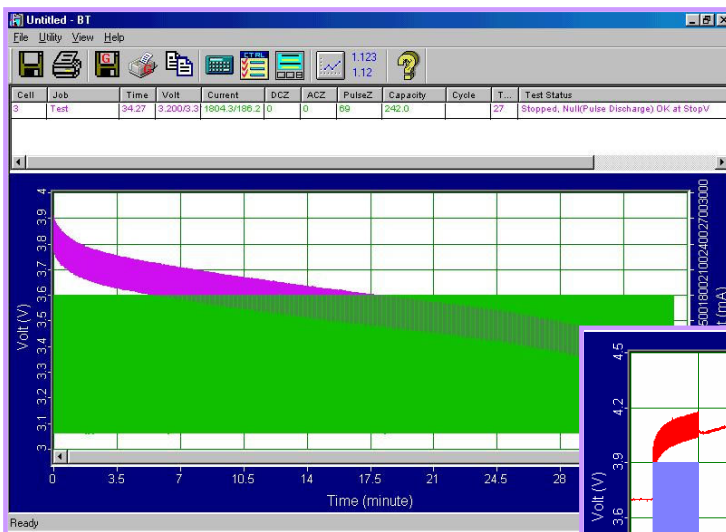
The high degree of accuracy, flexible test flow programming, and powerful measurement data analysis tools also make the MiNT 7526 the ideal tool for lithium battery technical development and load characterization. In addition, the system is perfect for quality control, quality assurance, and reliability certification.

## Features:

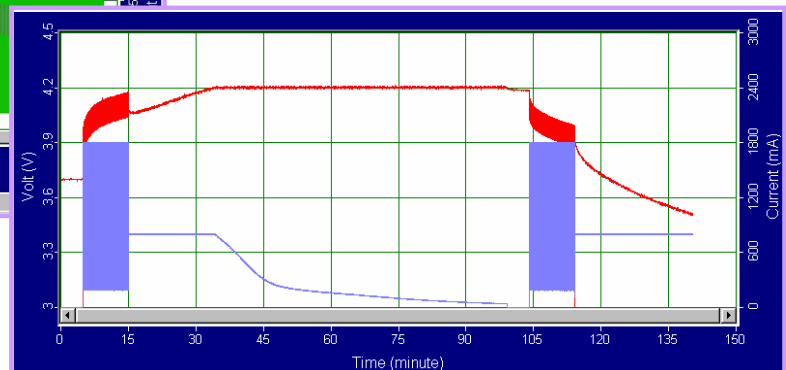
- Fully independent Tester-per-Channel architecture
- Flexible test flow - any test (e.g., internal resistance, pulse, leakage, etc.) can be performed as frequently as needed, at any time and at any sequence in the test flow.
- Independent single Cell measurement
- Pulsed and profile test
- High power capability for up to 20A charging/60A discharging 45V multi-cell test
- Extensive data acquisition and data analysis capability
- 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
- ◆ Programmable load profile testing
- ◆ Voltage measurement per cell
- ◆ Temperature measurement per cell
- ◆ OCV
- ◆ Voltage and current ramping control
- ◆ 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*

# Specifications<sup>1</sup>:

## Series 7526 Lithium Battery Test System

### Battery Test Control

Operating Modes:	CC, CV, CP, CR, 1KHz, Pulse, V Ramping, I Ramping, Arbitrary Profile
Charging Voltage:	0V to 45V
Discharging Voltage:	20V to 45V
Voltage Accuracy:	±25mV
Current Range:	Charge 20A Discharge 60A
Current Accuracy:	±30mA/±90mA
Pulse Range:	100ms to 5s
Pulse Resolution:	1ms
Pulse Rise Time:	1ms
Charge/Discharge Switching Time:	10ms
Profile Interval Resolution	1s

### Battery Measurement

Battery Voltage:	0 to 45V
Battery Voltage Accuracy:	±25mV
Cell Voltage:	0 to 5V
Cell Voltage Accuracy:	±2mV
Current Range:	Charge 20A Discharge 60A
Current Accuracy:	±30mA/±90mA
Temperature:	0°C to 100°C
Internal Resistance:	4 types - 1KHz AC, DC, and Pulse
Internal Resistance Accuracy:	1% ±0.1mΩ
Data Acquisition Time:	10ms and up
Cycle Life:	> 10,000 cycles

### Software

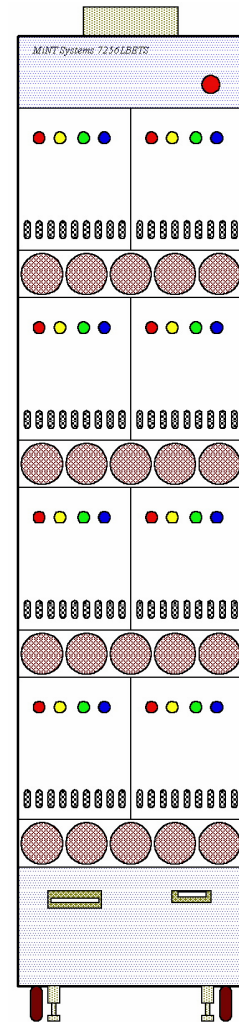
MiNT LBETS III application software:	MS Windows platform, runtime graphics display, test flow control, data analysis tools
Test Steps:	256 steps with >1,000,000 test block loops
Test End Criteria:	Voltage, Current, Time, Temperature, AH, WH, dV/dt, and other options, e.g. Pressure
Data Recording Criteria: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

### General

System Configuration:	8 channels per 19-inch rack
Minimum Configuration:	8 channels
Maximum Configuration:	>1,000 channels
Test Fixture:	4-wire Kelvin connection
UPS:	1 per 8 channels
AC Power Requirement:	208V, ±10%, three phase 47Hz to 65Hz, 8KW every 8 channels
Humidity:	20% to 80% RH, non-condensing
Operating Temperature:	5°C to 30°C

### Options

Arbitrary Profile Generator:	User-defined high speed charging/discharging profile generator
Cell Pressure Sensor:	User-specified Psi range



*MiNT Systems 7526 LBETS III Lithium Battery Test System for Engineering and Manufacturing use*

**MiNT Systems®**

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<sup>1</sup> Preliminary specifications subject to change without notice.