

TLI-1550ES

AA Size High Power High Energy Rechargeable Lithium Battery



Physical Characteristics

Length	53 mm. Max
Diameter	15.1 mm. Max
Weight	22 gr. Max

Electrical Characteristics (for batteries stored at RT for 1 year or less)

Charge

Maximum Charge Voltage	4.3 V
Charge Method	CCCV (Constant Current/Constant Voltage)
Maximum Charge Current @ -20 to +50 °C	100 mA
Maximum Charge Current @ -40 to +85 °C	20 mA

Discharge

Capacity @ 5 mA & RT to 2.0 V	1400 mAh (Typical)
Capacity @ 1 A & RT to 2.0 V	1200 mAh
Maximum Discharge Current @ 20 °C	
Continuous to 2.0 V (Without PTC)	5 A
1 second pulse to 2.0 V	10 A

Charge / Discharge operating temperature	-40 to +85 °C
Storage Temperature Range	-55 to +85 °C
Cell impedance	< 100 mΩ at 1 kHz

Performance

Item	Value	Conditions
Maximum Capacity when charged to 4.3 V	1400 mAh	Discharge at 5 mA to 2.0 V at 20 °C
	>1200 mAh	Discharge at 1 A to 2.0 V at 20 °C
	>800 mAh	Discharge at 1 A to 2.0 V at -40 °C
Charge / Discharge Cycles	75	*Charge 100 mA to 4.1 V EOC 20 mA, Discharge 350 mA to 3.0 V at 20 °C
Capacity Retention after 75* cycles (reversible)	70%	Discharge at 350 mA at 20 °C
Capacity Retention after 5 years (reversible)	91 %	Discharge at 50 mA at 20 °C

Item	Specification
Over charge protection	Cell voltage should not be higher than 4.3 V
Over discharge protection	Cell voltage should not be lower than 2.0 V

Safety Considerations

The cells successfully passed the following tests:

- Shock & Vibration
- Short Circuit at RT, & +55 °C
- Heating at 130 °C
- Forced Discharge
- Crush & Impact
- Temperature Cycling

WARNING:

Fire, Explosion, And Severe Burn Hazard.
Do Not Recharge, Crush, Disassemble
Heat Above 100 °C, Incinerate Or Short
Circuit.

Key Features

- High Power - 750W/kg / 1.79kW/L
- Hermetically sealed (glass-to-metal)
- Wide operating temperature range
- Low self discharge
- High output current
- High homogeneity
- End of life indication capability
- High reliability
- Lightweight
- Safe design
- Assembled in custom packs (per request)

Main Applications

- Emergency & Medical Devices
- Telemetry
- Navigation systems
- Device for immobilizing an attacker
- Electronical Grid Monitoring
- Wireless sensors
- Energy Harvesting
- Automotive
- Asset, Container & Cargo Tracking
- Internet of things (IOT)

Ordering P/N:

TLI-1550ES/S

TLI-1550ES/T

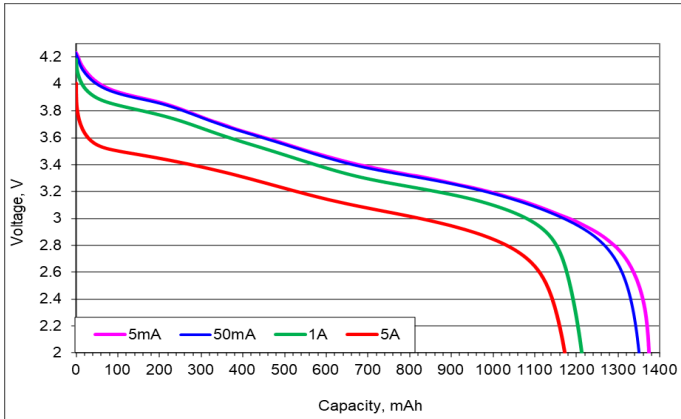
* Z2 - Indicates that the cell is equipped with PTC- SRP 200

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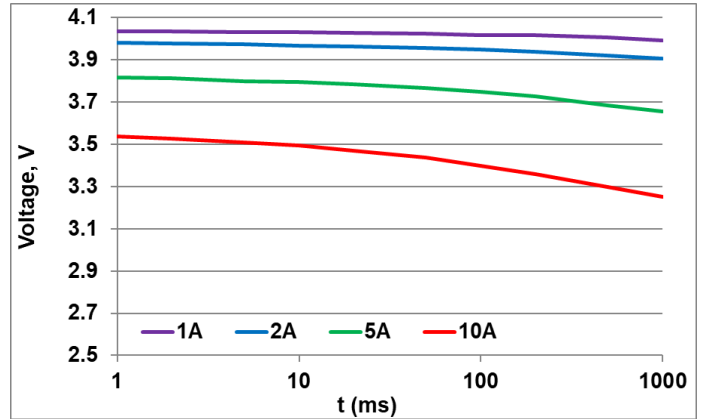
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Performance Data

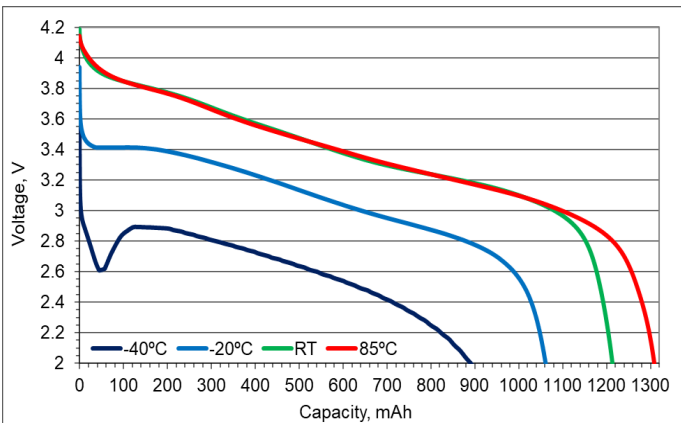
Discharge curves at Room Temperature



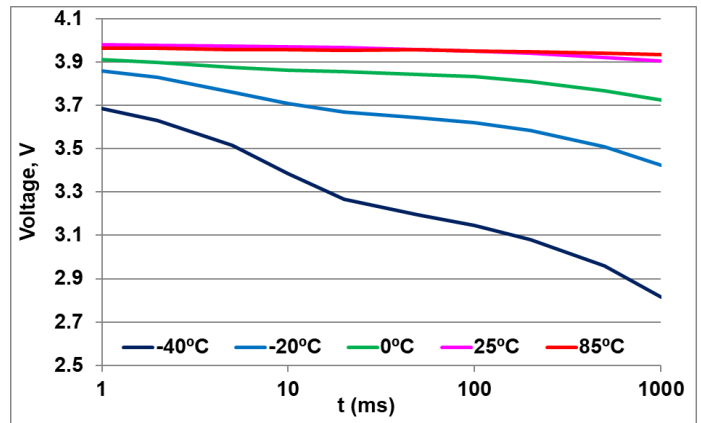
Pulse capability at Room Temperature



Discharge capability at various Temp, @ 1 A

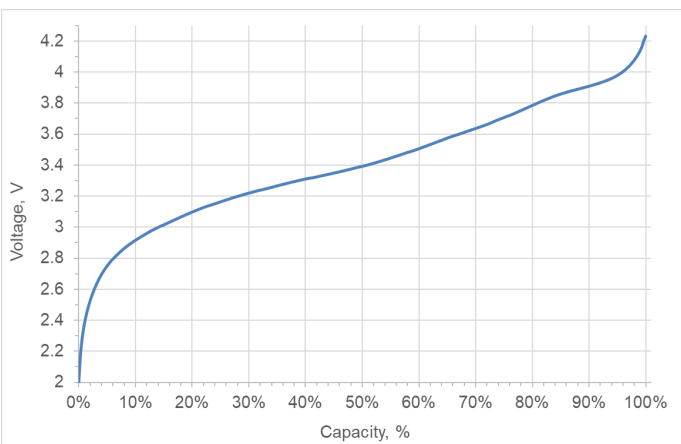


Pulse capability at several Temp. @ 2 A



Capacity vs. OCV

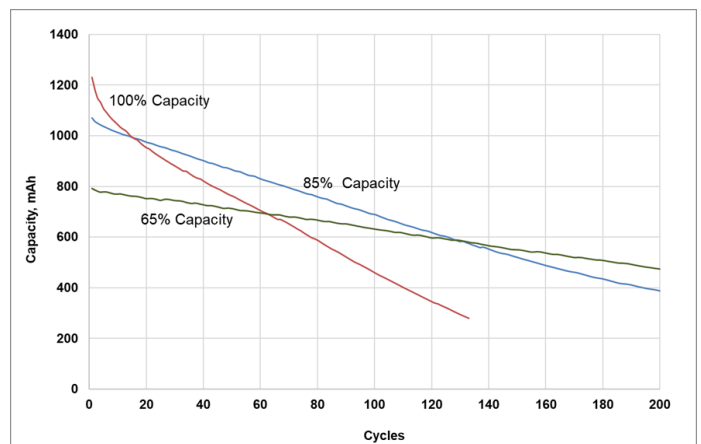
OCV measurements can provide a good estimation for the remaining capacity as shown below:



* When tested at RT at 5 mA to 2.0 V

Charge / Discharge Cycling

(100mA Charge; 350mA Discharge)



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