

TLI-1550SC



TADIRAN BATTERIES

AA Size High Power High Energy Rechargeable Lithium Battery

Notice: The application load profile has to be approved by Tadiran.

Charging circuits and protections have to be designed in line with Tadiran guidelines.



Physical Characteristics

| | |
|----------|--------------|
| Length | 51.5 mm. max |
| Diameter | 15 mm. max |
| Weight | 22 gr. max |

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

Charge

| | |
|--|--|
| Maximum Charge Voltage | 4.2 V |
| Charge Method | CCCV (Constant Current/Constant Voltage) |
| Maximum Charge Current @ -20 to +50 °C | 100 mA |
| Maximum Charge Current @ -40 to +85 °C | 50 mA |

For higher charging currents please consult Tadiran.

Discharge

| | |
|--|-------------------|
| Maximum Discharge Current @ 20 °C | |
| Continuous to 2.5 V (without PTC) | 5 A |
| 1 second pulse to 2.8 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 4.2 V | 1050 mAh | Discharge at 50 mA to 3.15 V at 20 °C |
| | 950 mAh | Discharge at 1 A to 3.15 V at 20 °C |
| | 850 mAh | Discharge at 50 mA to 3.25 V at 20 °C |
| | 800 mAh | Discharge at 1 A to 2.0 V at -40 °C |
| Charge / Discharge Cycles to 70% capacity | 300 | Discharge to 3.15 V |
| | >600 | Discharge to 3.25 V |

Battery pack assembly and usage considerations

- For 2 cells or more in series, voltage shall be monitored on each cell.
- For more than 2 cells in parallel, maximum charge current shall be limited to 250 mA for the whole pack.

Physical Cell / Battery Protection (to be applied by the user)

| 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 are designed to meet the requirements of the following tests:

Altitude simulation
Shock & Vibration
Short Circuit at RT and +57 °C
Heating at 130 °C
Forced Discharge
Crush
Temperature Cycling
Overcharge

Key Features

- High Power - 750 W/kg / 1.79 kW/l Continuous
- 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

- Internet of things (IoT)
- Asset, Container & Cargo Tracking
- Energy Harvesting
- Wireless sensors
- Electronical Grid Monitoring
- Navigation systems
- Automotive
- Telemetry
- Emergency & Medical Devices

Ordering P/N:

| | |
|--------------------|---------------|
| TLI-1550SC/S | 61-1560-22000 |
| TLI-1550SC/T | 61-1560-22150 |
| TLI-1550SC/TP | 61-1560-22250 |
| TLI-1550SC/Z2/T * | 61-1560-14250 |
| TLI-1550SC/Z2/TP * | 61-1560-14350 |

* Z2 indicates that the cell is equipped with PTC SRP 200

WARNING:

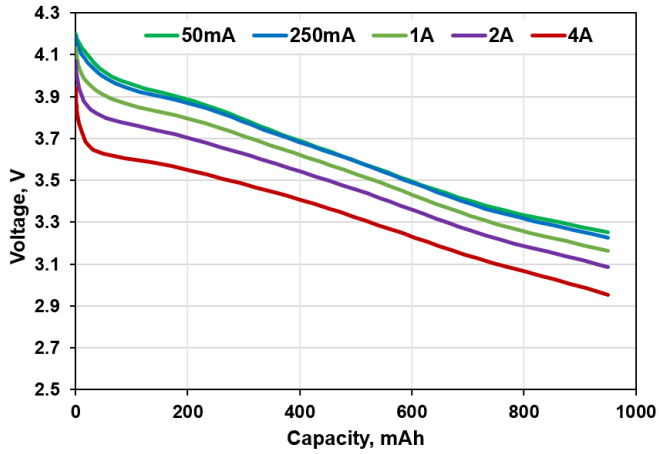
Fire, Explosion, And Severe Burn hazards.
Do Not Crush, Disassemble, Heat Above 100°C, Short Circuit, Incinerate Or Expose Contents to water.

www.tadiranbatteries.com

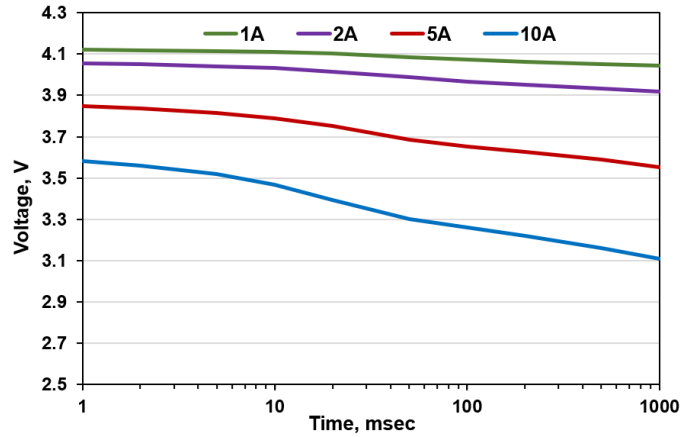
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Performance Data

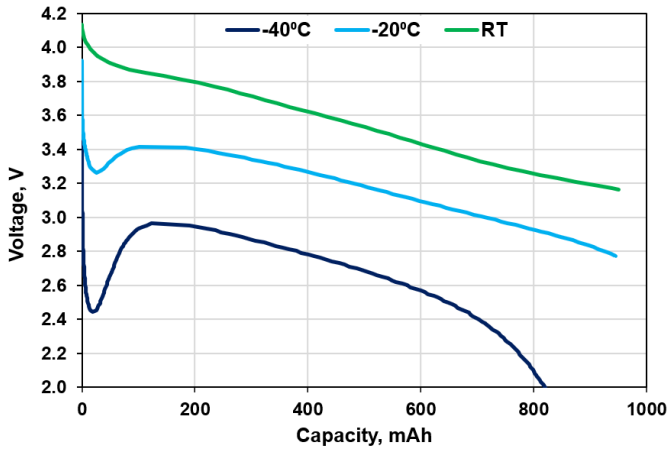
Discharge curves at room temperature



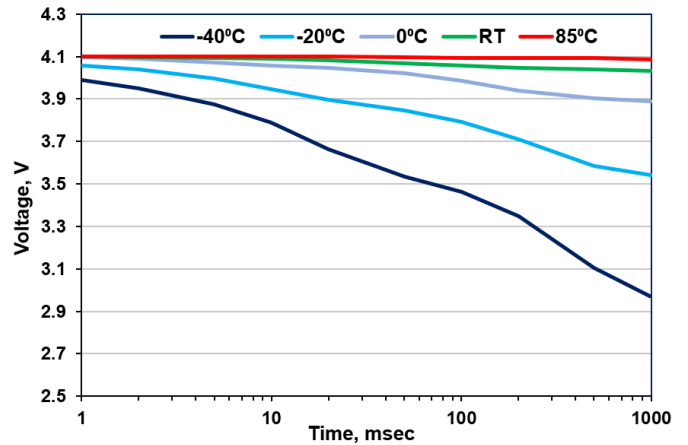
Pulse capability at room temperature, 4.2V potential



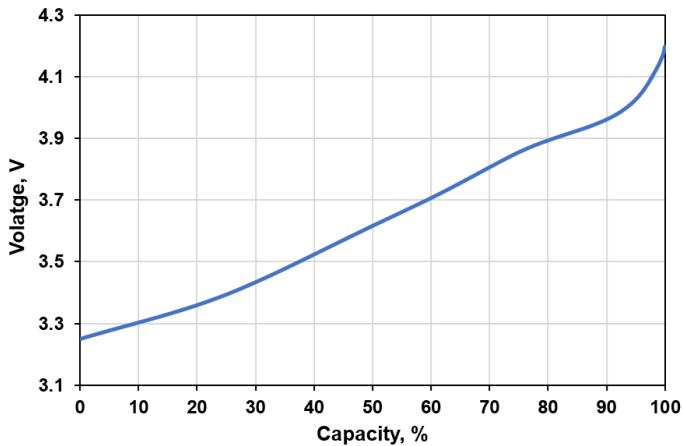
Discharge curves at 1 A



Pulse capability at 1 A, 4.2V potential

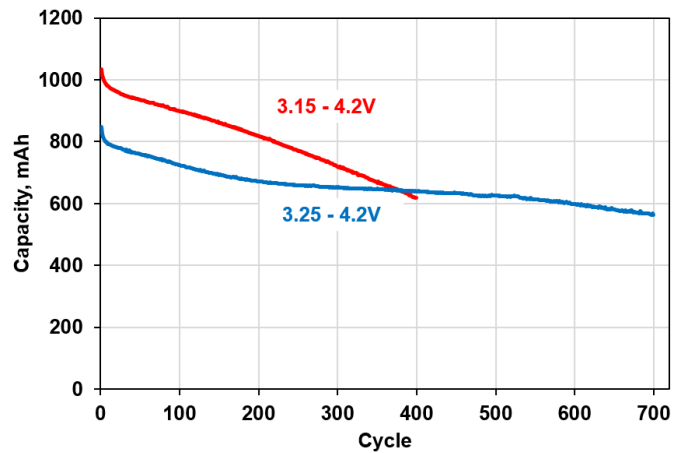


Capacity vs. OCV



Charge / Discharge cycling performance

(220 mA discharge, charge to 4.2V till current <20 mA)



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