

TLI-1520A



1/2AA Size Rechargeable Lithium Ion 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	21 mm. max
Diameter	14.8 ± 0.3 mm.
Weight	7.7 gr. max

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

Charge

Maximum Charge Voltage	4.1 V
Charge Method	CCCV (Constant Current/Constant Voltage)
Maximum Charge Current @ -20 to +50 °C	25 mA
Maximum Charge Current @ -40 to +85 °C	12 mA

For higher charging currents please consult Tadiran.

Discharge

Maximum Discharge Current @ 20 °C	
Continuous to 2.0 V (without PTC)	1.25 A
1 second pulse to 2.0 V	2.5 A
Charge / Discharge operating temperature	-40 to +85 °C
Storage Temperature Range	-55 to +85 °C
Cell impedance	< 250 mΩ at 1 kHz

Performance

Item	Value	Conditions
Maximum Capacity when charged to 4.1 V	80 mAh	Discharge at 25 mA to 2.0 V at 20 °C
	75 mAh	Discharge at 250 mA to 2.0 V at 20 °C
	65 mAh	Discharge at 50 mA to 2.0 V at -20 °C
Charge / Discharge Cycles	5000	Charge 25 mA to 4.1 V EoC 5 mA, Discharge at 50 mA to 2.5 V at 20 °C
Capacity Retention after 100 cycles (reversible)	80 mAh	Discharge at 50 mA at 20 °C
Capacity Retention after 5 years at RT (reversible)	70 mAh	Discharge at 50 mA at 20 °C

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

Item	Specification
Overcharge protection	Cell voltage should not be higher than 4.3 V
Overdischarge protection	Cell voltage should not be lower than 2.0 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 62.5 mA for the whole pack.

Safety Considerations

The cells successfully passed the following tests:

- Altitude simulation
- Shock & Vibration
- Short Circuit at RT, +57 and +85 °C
- Heating at 130 °C
- Forced Discharge
- Crush and Impact
- Temperature Cycling
- Overcharge

UN Manual of Tests & Criteria

UL 1642, File MH12193

IEC 62133



Key Features

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

Ordering P/N:

TLI-1520A/S	61-1521-14110
TLI-1520A/T	61-1521-14210
TLI-1520A/TP	61-1521-16310
TLI-1520A/Z2/T *	61-1521-14250
TLI-1520A/Z2/TP *	61-1521-14350

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

WARNING:

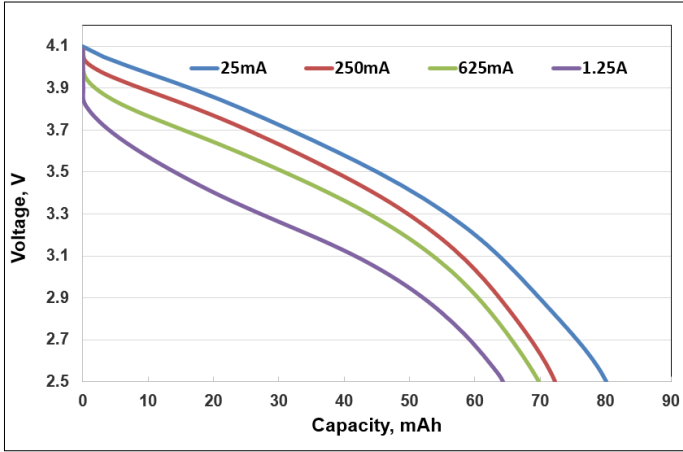
Fire, Explosion, And Severe Burn hazards.
Do Not Crush, Disassemble, Heat Above 100°C, Short Circuit, Incinerate Or Expose Contents to water.

www.tadiranbatteries.com

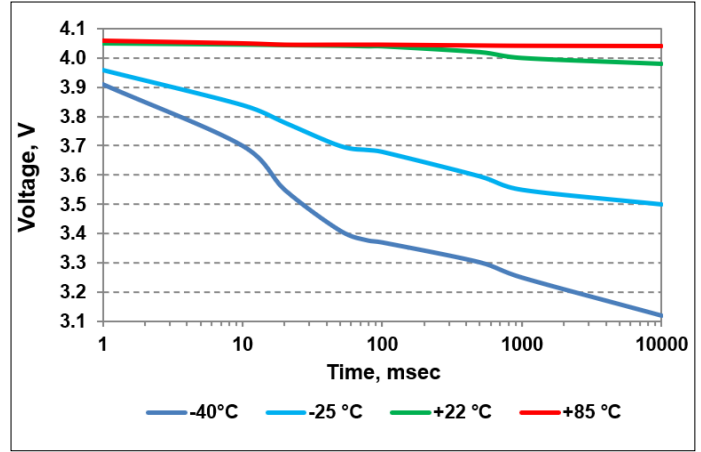
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Performance Data

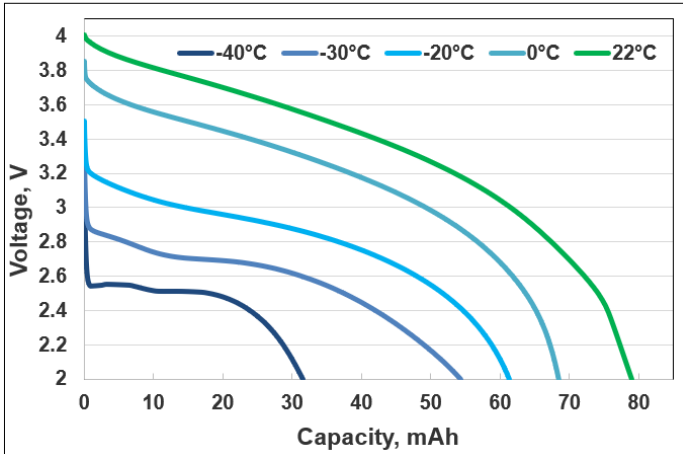
Discharge curves at Room Temperature



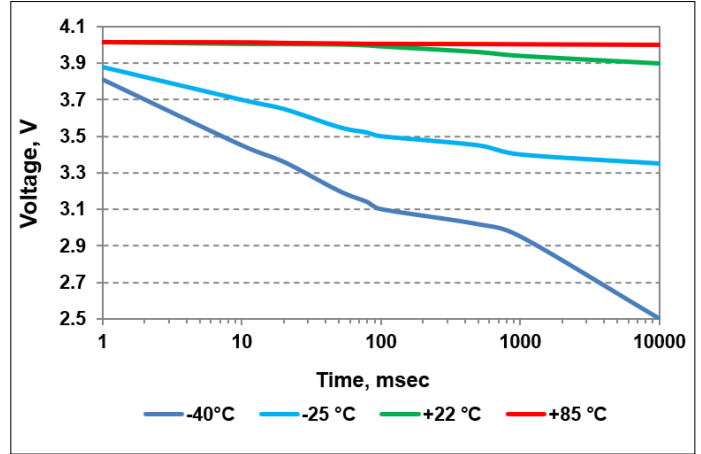
Voltage Curves at 200 mA



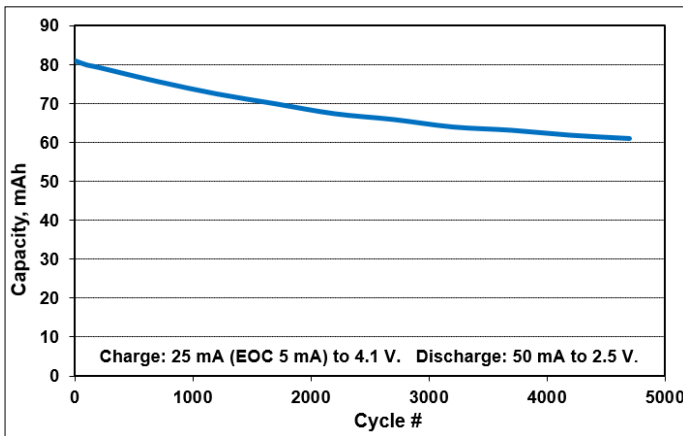
Discharge curves at 0.5 A



Voltage Curves at 300 mA



Charge / Discharge Cycling Performance



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