Extended High Capacity
TLI-1550S

TADIRAN BATTERIES LTD

AA Size Lithium Ion Rechargeable Battery

Notice: Charging circuit and application load profile have to be approved by Tadiran prior to the use of this cell.

Physical Characteristics

Length	53 mm. Max
Diameter	14.8 ± 0.3 mm
Weight	21 gr. Max

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

Charge

Max, Charge Voltage	4.1 V
Charge Method	CCCV (Constant Current/Constant Voltage)
Max Charge Current @ -20 to +50 °C	50 mA
Max Charge Current @ -40 to +85 °C	20 mA
Charge / Discharge operating temp.	-40 to +85 °C

Discharge

Max. Continuous Discharge Current	4.0 A @ 20 °C (without PTC)
End of Discharge	2.5 V @ RT. (discharge below 2.5 V at 20 °C *may increase the cell internal impedance)*

Performance

Item	Value	Conditions
Maximum Capacity when charged to 4.1 V	1000 mAh 900 mAh	Discharge at 50 mA to 2.5 V at 20 ***°C*** Discharge at 1 A to 2.5 V at 20 ***°C***
Charge / Discharge Cycles	25	At Room Temperature (see attached chart)
Capacity Retention after 25 cycles (reversible)	80 %	Discharge at 250 mA at 20 ***°C***
Capacity Retention after 5 years (reversible)	91 %	Discharge at 250 mA at 20 ***°C***
Impedance (RT)	< 100 mΩ	Impedance at 1 KHz

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

Item	Specification
Over charge protection	Cell voltage should not be higher than 4.2 V
Over discharge protection	Cell voltage should not be lower than 2.4 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.

Safety Considerations

The cells successfully passed the following tests:

Shock & Vibration	UL, IEC
Short Circuit at RT, +55 °C & +72 °C	UN, UL, IEC
Heating at 130 °C	UL, IEC
Over Charge	UN, UL, IEC
Forced Discharge	UN, UL, IEC
Crush & Impact	UN, UL, IEC

UN Manual of Tests & Criteria

UL 1642, File MH12193

IEC 62133

WARNING:

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

Key Features

- Hermetically sealed (glass-to-metal)
- Wide operating temperature range
- Low self discharge
- High output current
- High reliability
- Safe design
- Lightweight

Main Applications

- Energy Harvesting
- Wireless Sensors
- BUB in Metering
- Asset, Container & Cargo Tracking
- Parking Meters
- Electrical Grid Monitoring
- Emergency & Medical Devices
- Automotive
- Industrial and Agricultural IOT

Ordering P/N:

TLI-1550S/Z2/T *	61-1559-22250
TLI-1550S/Z2/TP *	61-1559-29200

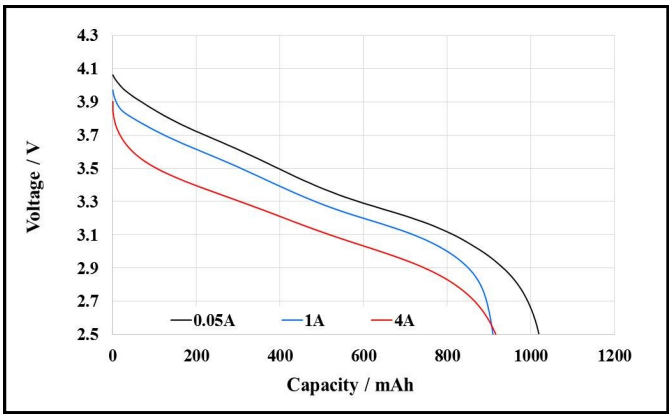
* Z2 - Indicates that the cell is equipped with PTC- SRP 200.

For cells without the PTC, please contact Tadiran Batteries

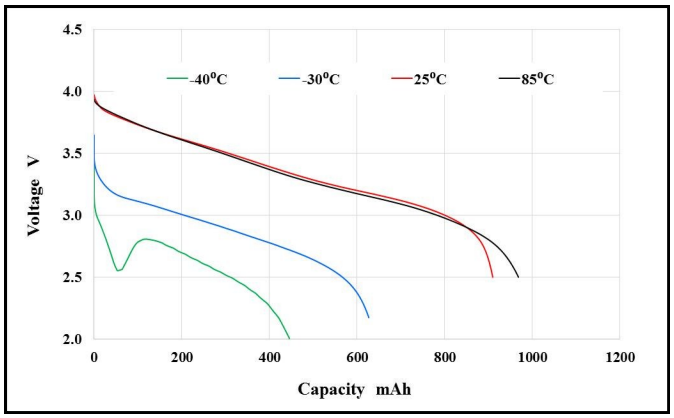
www.tadiranbatteries.com

Performance Data

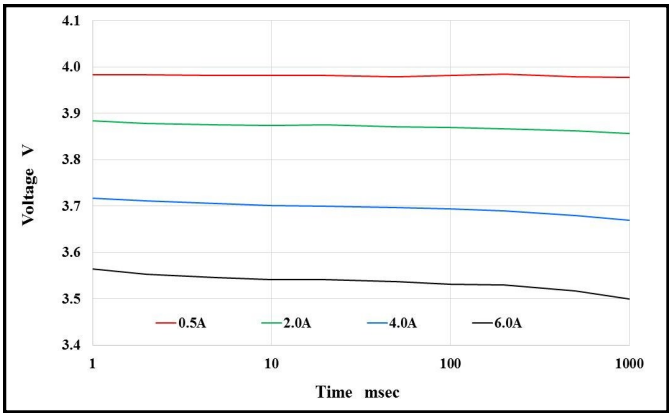
Discharge curves at 20 °C



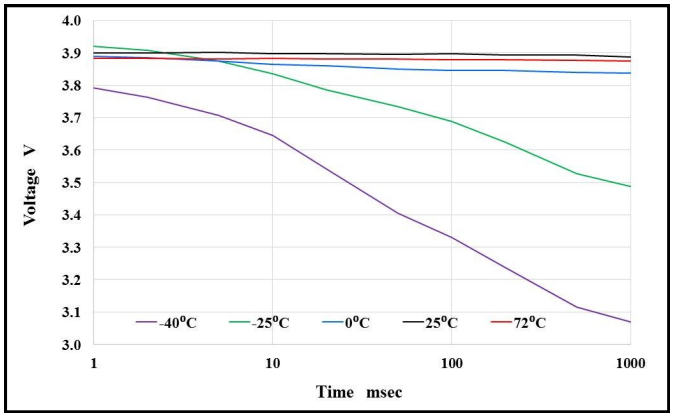
Discharge curves @ 1 A



Pulse Capability at RT

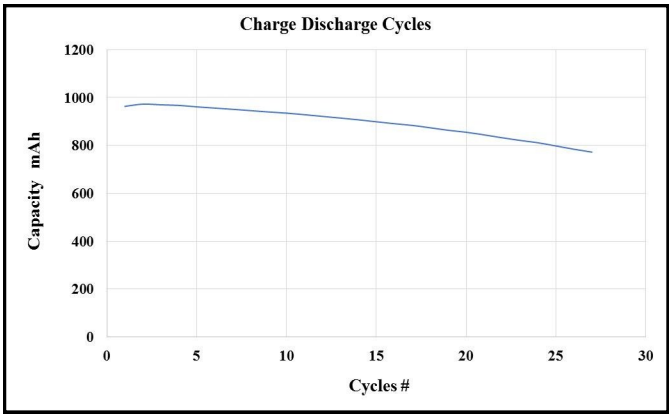


1 Sec. Pulse Capability at 1 A



Charge/Discharge Cycling Performance RT

(100 mA to 4.1 V(EOC 20 mA; Discharge 250 mA to 2.5 V)



Open Circuit Voltage Vs. Capacity

(100 % capacity = 1000 mAh at 50 mA discharge to 2.5 V)