

For high temperature applications

TLI-1550HT



TADIRAN BATTERIES

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	52 mm. max.
Diameter	15.1 ± 0.3 mm.
Weight	18.8 g. 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)
Max Charge Current @ -20 to +50 °C	120 mA
Max Charge Current @ -40 to +135 °C	20 mA

Discharge

Max. Continuous Discharge Current	5.0 A @ 20 °C
End of Discharge	2.2 V @ RT. (discharge below 2.2 V at 20 °C may increase the cell internal impedance)

Charge / Discharge operating temp. -40 to +135 °C

Performance

Item	Value	Conditions
Maximum Capacity when charged to 4.1 V	500 mAh	Discharge at 20 mA to 2.2 V at 20 °C
Charge / Discharge Cycles	>1000	At Room Temperature
Capacity Retention after 100 cycles (reversible)	93 %	Discharge at 100 mA at 20 °C
Capacity Retention after 5 years (reversible)	91 %	Discharge at 100 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 2.2 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	UN	<i>UN Manual of Tests & Criteria</i>
Short Circuit at RT, +55 °C & +72 °C	UN	
Heating at 170 °C		
Over Charge	UN	
Forced Discharge	UN	
Crush	UN	
Impact		

Key Features

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

Main Applications

- Medical autoclavable devices
- Heavy-duty vehicle engines
- Automotive utilities at high temp
- Oil and gas drilling

Ordering P/N:

TLI-1550HT/S	61-1563-22000
TLI-1550HT/T	61-1563-22150
TLI-1550HT/Z2/T	61-1563-14250
TLI-1550HT/TP	61-1563-22250
TLI-1550HT/Z2/TP	61-1563-22350

WARNING:

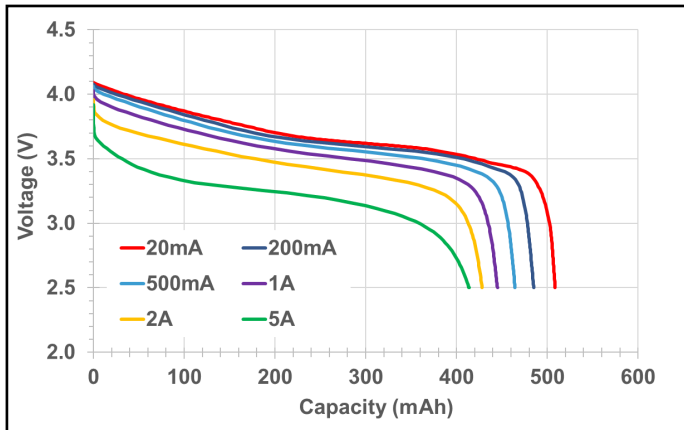
Fire, Explosion, And Severe Burn Hazard.
Do Not Crush, Disassemble, Heat Above 150°C, Incinerate or Short Circuit.
Protect from moisture.

www.tadiranbatteries.com

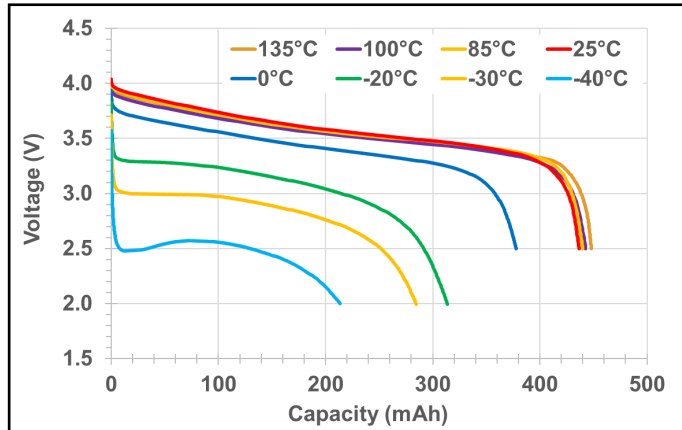
THE INFORMATION PROVIDED HERE IS NECESSARILY OF A GENERAL NATURE. SINCE SPECIFIC PERFORMANCE DEPENDS ON ACTUAL OPERATING AND STORAGE CONDITIONS, OUR ENGINEERS WILL PROVIDE PARTICULAR APPLICATION INSTRUCTIONS UPON REQUEST. DATA SUBJECT TO REVISION WITHOUT NOTICE. ANY REPRESENTATION IN THIS BROCHURE CONCERNING PERFORMANCE ARE FOR INFORMATION PURPOSES ONLY AND NOT WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF FUTURE PERFORMANCE. TADIRAN'S STANDARD LIMITED WARRANTY, STATED IN ITS SALES CONTRACT OR ORDER CONFIRMATION FORM IS THE ONLY WARRANTY OFFERED BY TADIRAN.

Performance Data

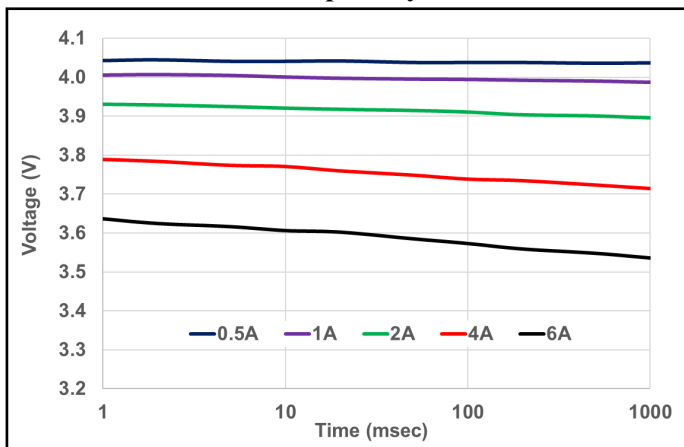
Discharge curves at Room Temperature



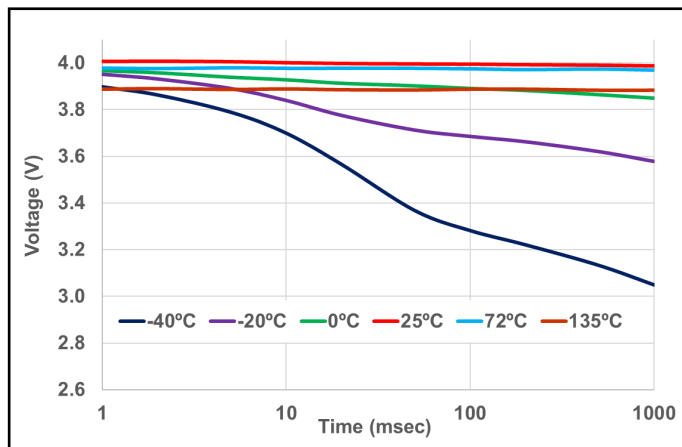
Discharge curves at 1 A



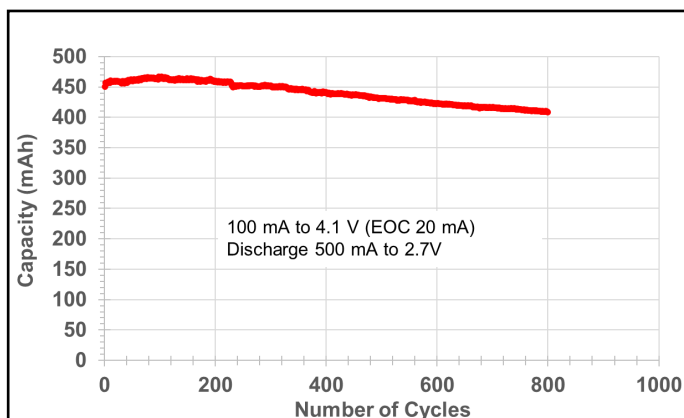
Pulse Capability at RT



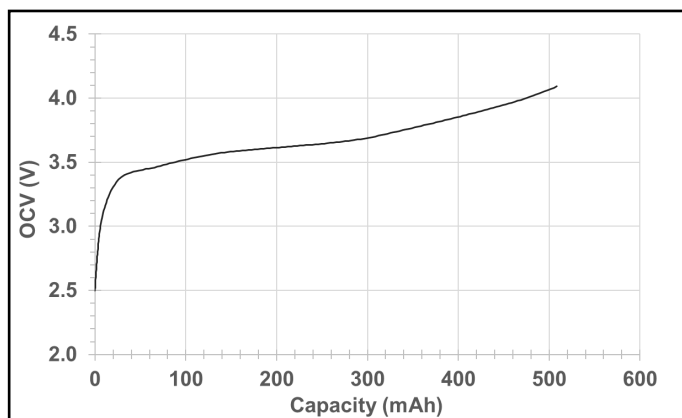
Pulse Capability at 1 A



Charge/Discharge Cycling at RT



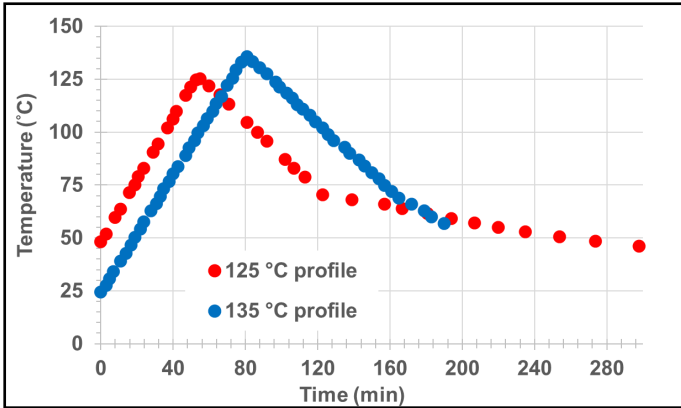
Open Circuit Voltage vs Capacity



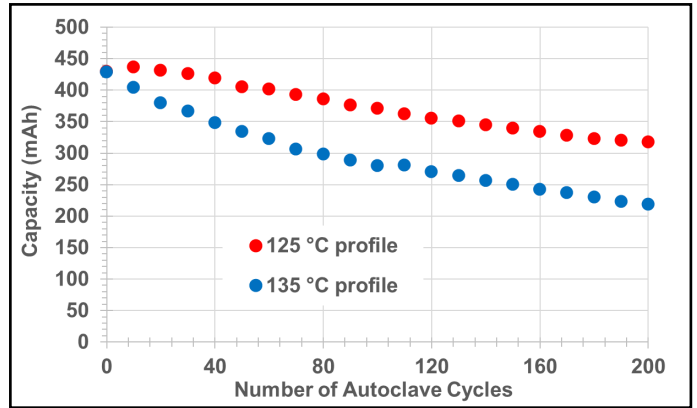
THE INFORMATION PROVIDED HERE IS NECESSARILY OF A GENERAL NATURE. SINCE SPECIFIC PERFORMANCE DEPENDS ON ACTUAL OPERATING AND STORAGE CONDITIONS, OUR ENGINEERS WILL PROVIDE PARTICULAR APPLICATION INSTRUCTIONS UPON REQUEST. DATA SUBJECT TO REVISION WITHOUT NOTICE. ANY REPRESENTATION IN THIS BROCHURE CONCERNING PERFORMANCE ARE FOR INFORMATION PURPOSES ONLY AND NOT WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF FUTURE PERFORMANCE. TADIRAN'S STANDARD LIMITED WARRANTY, STATED IN ITS SALES CONTRACT OR ORDER CONFIRMATION FORM IS THE ONLY WARRANTY OFFERED BY TADIRAN.

Performance Data

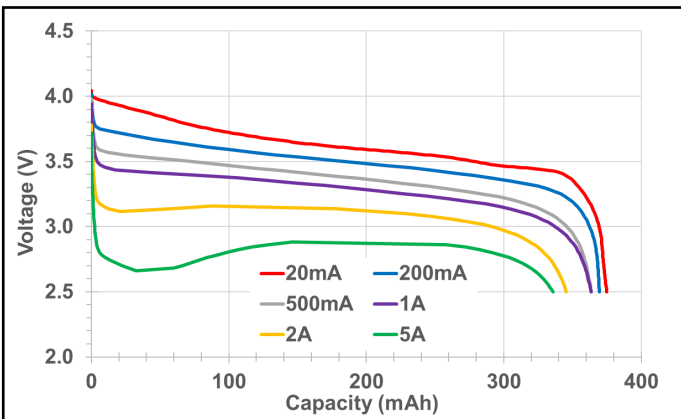
Autoclave cycle profiles



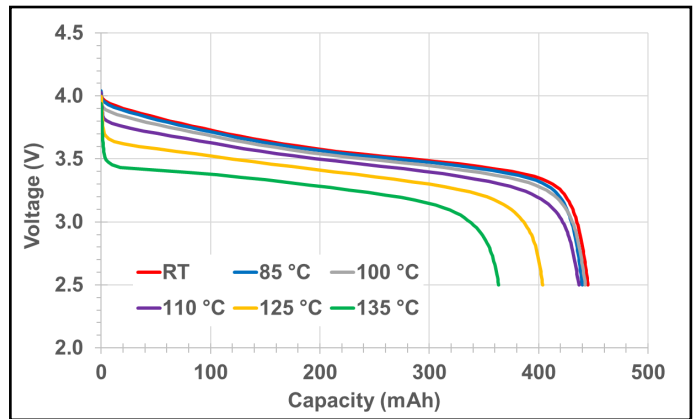
Discharge at 0.5 A vs Autoclave cycles



Discharge after 24h at 135 °C



Discharge at 0.5 A after 24h at various temperatures



THE INFORMATION PROVIDED HERE IS NECESSARILY OF A GENERAL NATURE. SINCE SPECIFIC PERFORMANCE DEPENDS ON ACTUAL OPERATING AND STORAGE CONDITIONS, OUR ENGINEERS WILL PROVIDE PARTICULAR APPLICATION INSTRUCTIONS UPON REQUEST. DATA SUBJECT TO REVISION WITHOUT NOTICE. ANY REPRESENTATION IN THIS BROCHURE CONCERNING PERFORMANCE ARE FOR INFORMATION PURPOSES ONLY AND NOT WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF FUTURE PERFORMANCE. TADIRAN'S STANDARD LIMITED WARRANTY, STATED IN ITS SALES CONTRACT OR ORDER CONFIRMATION FORM IS THE ONLY WARRANTY OFFERED BY TADIRAN.