

AA Size Lithium-Ion Rechargeable 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	14.7 ± 0.3 mm.
Weight	20 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	100 mA
Max Charge Current @ -40 to +135 °C	50 mA

Discharge

Maximum Discharge Current @ 20 °C	
Continuous to 2.0 V (without PTC)	5 A
1 second pulse to 2.0 V	15 A
Charge / Discharge operating temperature	-40 to +135 °C
Storage temperature range	-55 to +135 °C

Performance

Item	Value	Conditions
Maximum Capacity when charged to 4.1 V	500 mAh	Discharge at 20 mA to 2.0 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 4.3 V
Over discharge 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 250 mA for the whole pack.

Safety Considerations

The cells successfully passed the following tests:

- Altitude simulation
- Shock & Vibration
- Short Circuit at RT, 55 °C & +72 °C
- Heating at 150 °C
- Forced Discharge
- Crush
- Temperature Cycling
- Overcharge

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

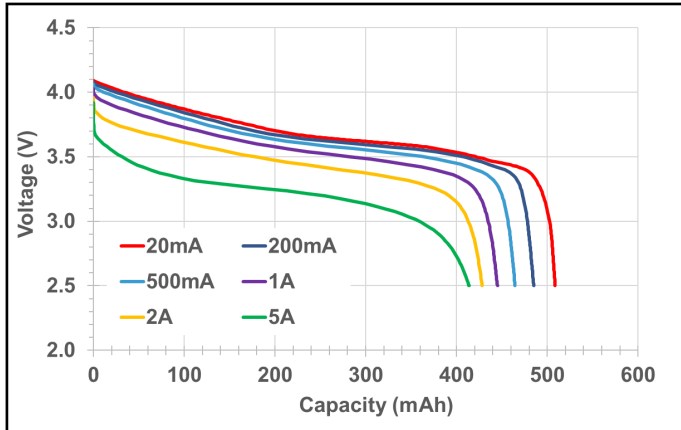
WARNING:

Fire, Explosion, And Severe Burn hazards.
Do Not Crush, Disassemble, Heat Above 135°C, Short Circuit, Incinerate Or Expose Contents to water.

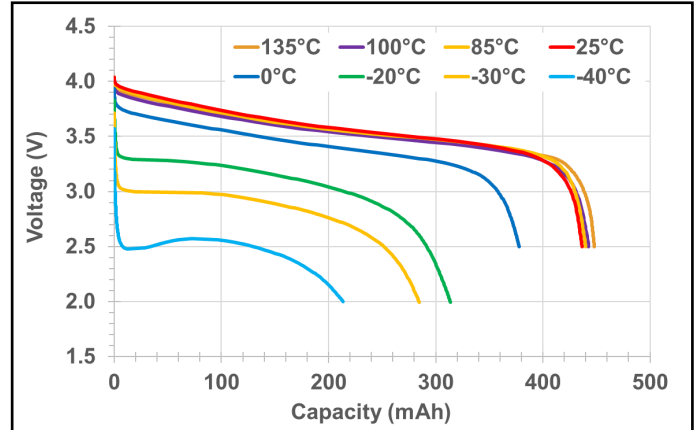
www.tadiranbatteries.com

Performance Data

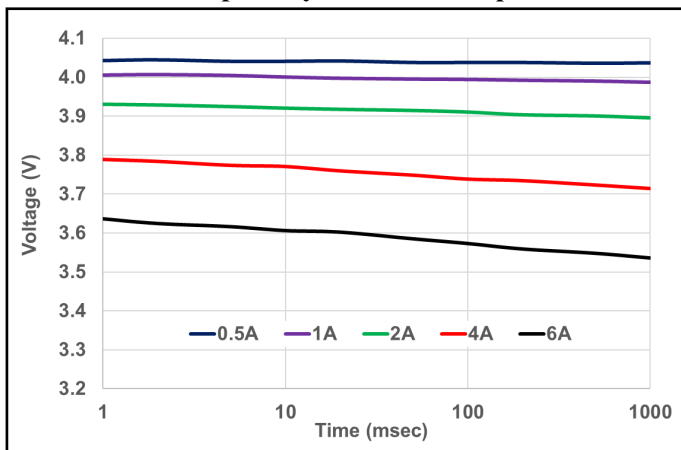
Discharge curves at Room Temperature



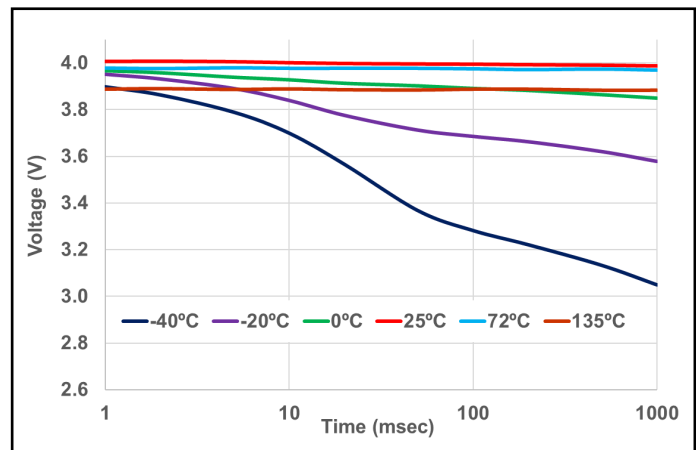
Discharge curves at 1 A



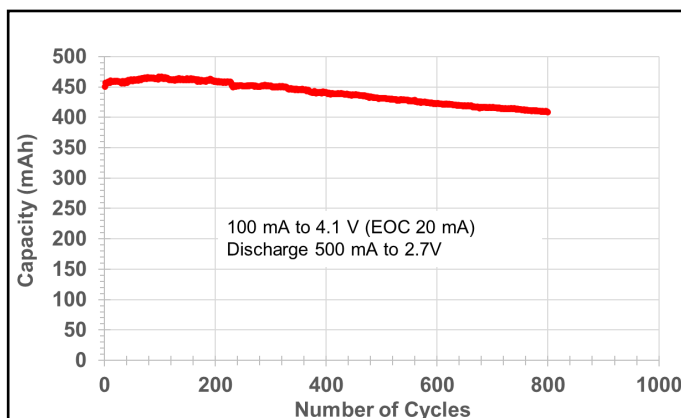
Pulse Capability at Room Temperature



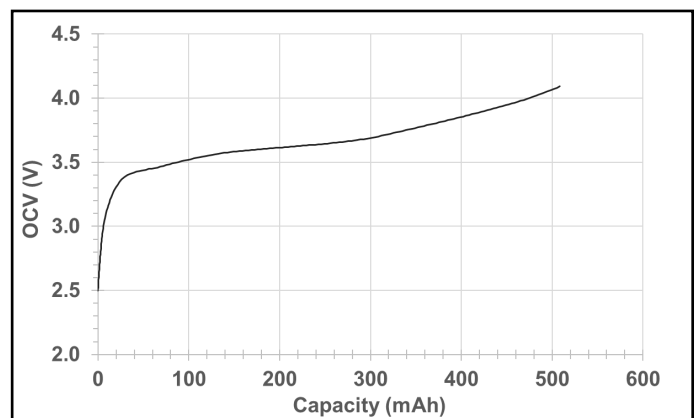
Pulse Capability at 1 A



Charge/Discharge Cycling at Room Temperature



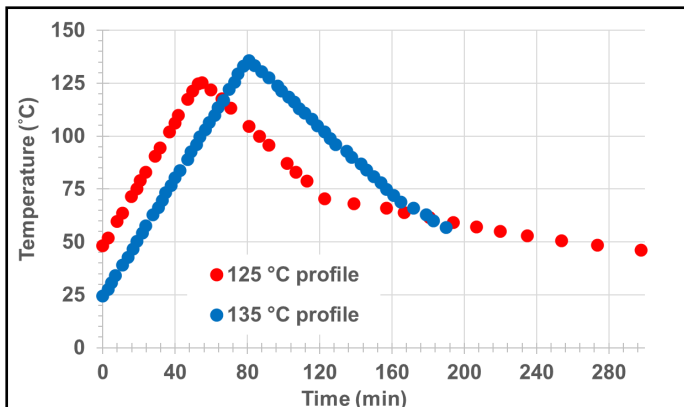
Open Circuit Voltage vs Capacity



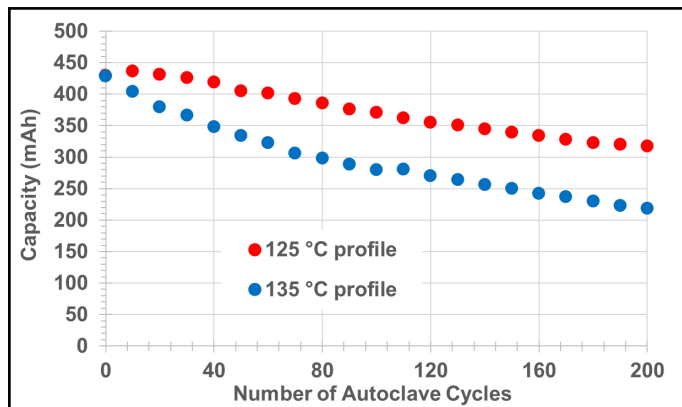
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Performance Data

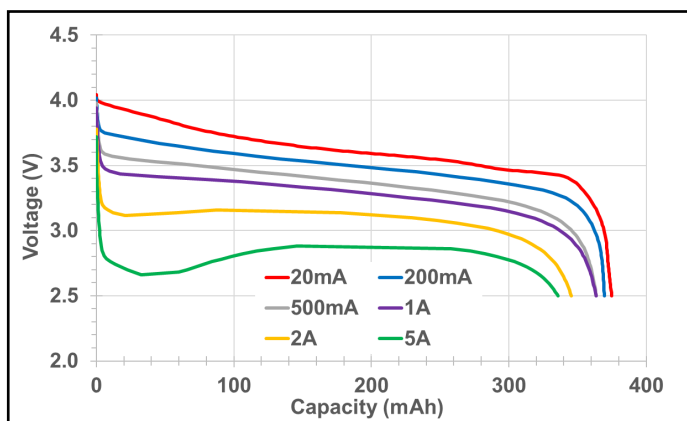
Autoclave cycle profiles



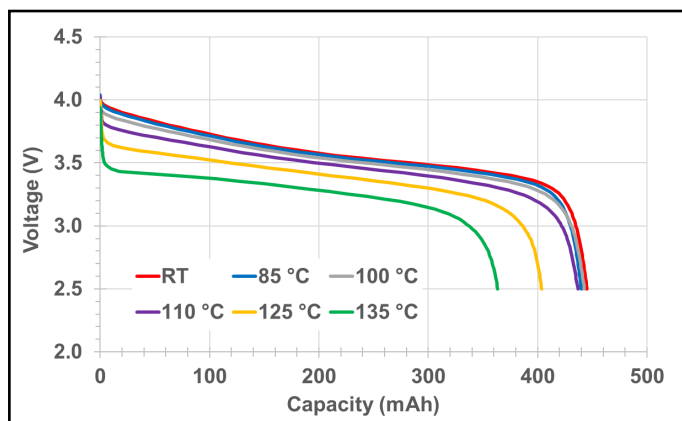
Discharge at 0.5 A vs Autoclave cycles



Discharge after 24h at 135°C



Discharge at 0.5 A after 24h at various temperatures



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