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 ºC 50 mA
Max Charge Current @ -40 to +85 ºC 20 mA
Charge / Discharge operating temp. -40 to +85 ºC

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

Performance

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Capacity when charged to 4.1 V</td>
<td>1000 mAh</td>
<td>Discharge at 50 mA to 2.5 V at 20 ºC</td>
</tr>
<tr>
<td></td>
<td>900 mAh</td>
<td>Discharge at 1 A to 2.5 V at 20 ºC</td>
</tr>
<tr>
<td>Charge / Discharge Cycles</td>
<td>25</td>
<td>At Room Temperature (see attached chart)</td>
</tr>
<tr>
<td>Capacity Retention after 25 cycles (reversible)</td>
<td>80 %</td>
<td>Discharge at 250 mA at 20 ºC</td>
</tr>
<tr>
<td>Capacity Retention after 5 years (reversible)</td>
<td>91 %</td>
<td>Discharge at 250 mA at 20 ºC</td>
</tr>
<tr>
<td>Impedance (RT)</td>
<td>&lt; 100 mΩ</td>
<td>Impedance at 1 KHz</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over charge protection</td>
<td>Cell voltage should not be higher than 4.2 V</td>
</tr>
<tr>
<td>Over discharge protection</td>
<td>Cell voltage should not be lower than 2.4 V</td>
</tr>
</tbody>
</table>

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 ºC & +72 ºC UN, UL, IEC
- Heating at 130 ºC UL, IEC
- Over Charge UN, UL, IEC
- Forced Discharge UN, UL, IEC
- Crush & Impact UN, UL, IEC

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

WARNING:
Fire, Explosion, And Severe Burn Hazard. Do Not Crush, Disassemble, Heat Above 100 ºC, Incinerate Or Short Circuit.

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.

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)