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

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>52 mm. Max</td>
</tr>
<tr>
<td>Diameter</td>
<td>15.1 ± 0.3 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>18.8 gr. Max</td>
</tr>
</tbody>
</table>

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 120 mA  
Max Charge Current: @ -40 to +85 °C 20 mA  
Charge / Discharge operating temp.: -40 to +135 °C

**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)

**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>500 mAh</td>
<td>Discharge at 20 mA to 2.2 V at 20 °C</td>
</tr>
<tr>
<td>Charge / Discharge Cycles</td>
<td>&gt;1000</td>
<td>At Room Temperature (see attached chart)</td>
</tr>
<tr>
<td>Capacity Retention after 100 cycles (reversible)</td>
<td>93 %</td>
<td>Discharge at 100 mA at 20 °C</td>
</tr>
<tr>
<td>Capacity Retention after 5 years (reversible)</td>
<td>91 %</td>
<td>Discharge at 100 mA at 20 °C</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 2.2 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: UN
- Short Circuit at RT, +55 °C & +72 °C: UN
- Heating at 170 °C: UN
- Over Charge: UN
- Forced Discharge: UN
- Crush: UN
- Impact: UN

**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 drillers
- 

**Ordering P/N:**

<table>
<thead>
<tr>
<th>Product</th>
<th>P/N</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLI-1550HT/S</td>
<td>61-1563-22000</td>
<td></td>
</tr>
<tr>
<td>TLI-1550HT/T</td>
<td>61-1563-22150</td>
<td></td>
</tr>
</tbody>
</table>

**WARNING:**


www.tadiranbatteries.com
Performance Data

Discharge curves at Room Temperature

1 Sec. Pulse Capability at RT

Charge/Discharge Cycling at RT

Open Circuit Voltage Vs. Capacity

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Performance Data

Practical Autoclave cycle profiles

Discharge after 24h @ 135°C

Discharge at 1A after 24h @ various temperatures

Discharge @0.5A vs. Autoclave cycles

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