For **PulsesPlus™** batteries

**Electrical characteristics** (For batteries stored at RT for 1 year or less)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity when charge to 3.67 V</td>
<td>140 As</td>
</tr>
<tr>
<td>Capacity when charge to 3.90 V</td>
<td>210 As</td>
</tr>
<tr>
<td>Discharge end voltage</td>
<td>2.5 V (discharge below 2.5 V at RT may increase the HLC internal impedance). For other temperatures and discharge condition please contact Tadiran for these end voltage conditions.</td>
</tr>
</tbody>
</table>

**Mechanical characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>20 mm. max</td>
</tr>
<tr>
<td>Diameter</td>
<td>15.1 mm. max</td>
</tr>
<tr>
<td>Weight</td>
<td>7.7 gr. max</td>
</tr>
</tbody>
</table>

**Operating conditions**

- **Maximum discharge current:**
  - Continuous: 0.5 A
  - Pulse, 1 sec: 2.0 A
- **Charge (constant current):**
  - Max. charge voltage: 3.95 V
  - Max. charge current: 25 mA
- **Operating temperature range**
  - HLC in PulsesPlus™ battery: -40 °C ÷ +85 °C
  - Storage temperature range of HLC: -40 °C ÷ +60 °C
- **Cell impedance at RT:** < 250 mΩ at 1 kHz
- **Self discharge of PulsesPlus™ battery at RT:** 1 µA
- **Self discharge of PulsesPlus™ battery at 80 °C:** 5 µA

**Safety**

- **Shelf life at different storage temperature to 80% of initial capacity**
<table>
<thead>
<tr>
<th>Temperature</th>
<th>HLC</th>
<th>HLC in PulsesPlus™ battery</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT</td>
<td>3 years</td>
<td>10 years</td>
</tr>
<tr>
<td>60 °C</td>
<td>4 weeks</td>
<td>7 years</td>
</tr>
<tr>
<td>80 °C</td>
<td>1 week</td>
<td>At least 1 year</td>
</tr>
</tbody>
</table>

**Technology**

- Anode: Carbon based
- Cathode: Multi metal oxides
- Electrolyte: Organic
- Shut down separator

**Key Features**

- Hermetically sealed (glass-to-metal)
- Wide operating temperature range
- Low self discharge
- End of life indication capability
- High reliability
- Lightweight
- Safe design

**Main Applications**

- Utility Meters (AMR)
- Asset, Container & Cargo Tracking
- RFID Devices
- Sonar Buoys
- Communication Equipment
- Emergency & Medical Devices

**Ordering Part No.**

| HLC-1520A/S | 61152122000 |
| HLC-1520A/T | 61152122150 |
| HLC-1520A/TP | 61152132000 |
| HLC-1520A/PT2 | 61152135000 |

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**WARNING:**

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

Voltage curves for HLC1520A at Li/SCl₂ potential (3.67 V), 200 mA

![Voltage curve for HLC1520A at Li/SCl₂ potential (3.67 V), 200 mA](image1)

Voltage curves for HLC1520A at Li/SCl₂ potential (3.90 V), 200 mA

![Voltage curve for HLC1520A at Li/SCl₂ potential (3.90 V), 200 mA](image2)

Voltage curves for HLC1520A at Li/SCl₂ potential (3.67 V), 350 mA

![Voltage curve for HLC1520A at Li/SCl₂ potential (3.67 V), 350 mA](image3)

Voltage curves for HLC1520A at Li/SCl₂ potential (3.90 V), 350 mA

![Voltage curve for HLC1520A at Li/SCl₂ potential (3.90 V), 350 mA](image4)

Available capacity vs. OCV for HLC1520A (at RT, 50 mA discharge)

![Available capacity vs. OCV for HLC1520A](image5)

**Warning:**

- The HLC is designed for use in a PulsesPlus™ battery or in low charge current as specified only. The HLC may explode or violently vent if over-charge above 4.4V.
- Do not charge the HLC higher than 4.1 V, over discharge, short circuit, heat above 100 °C, incinerate or expose content to water.
- Charging the HLC at above 3.95 V may lead to capacity loss and / or internal impedance rise.
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