Tadiran High Power Lithium Organic Cell  
Model TLM-1550MP

1. **Scope**

This data sheet describes the mechanical design and performance of Tadiran high power lithium organic cell model TLM-1550MP.

2. **Characteristics**

2.1. **Physical**

2.1.1. Length: 51 ±1 mm.
2.1.2. Diameter: 14.8 ± 0.3 mm.
2.1.3. Weight: 20 g max.

2.2. **Electrical**

2.2.1. Open Circuit Voltage

(for batteries stored at RT for 1 year or less)  4.02 to 4.07 V

2.2.2. Closed Circuit Voltage (at 0.1 sec) at 0.5 A load

3.88 V minimum

2.2.3. Discharge

- Discharge capacity at 50 mA @ RT to 2 V: 800 mAh
- Discharge capacity at 500 mA @ RT to 2 V: 700 mAh

Maximum discharge current

- Continuous to 2.0 V: 4 A
- 1 second pulse to 2.0 V: 15 A

2.3. Operating Temperature range:

-40 °C to 85 °C

2.4. Accumulated Capacity Loss*:

<table>
<thead>
<tr>
<th>Storage Temperature</th>
<th>22 °C</th>
<th>55 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Time [Y]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2 %</td>
<td>4 %</td>
</tr>
<tr>
<td>5</td>
<td>5 %</td>
<td>15 %</td>
</tr>
<tr>
<td>10</td>
<td>7.5 %</td>
<td>22 %</td>
</tr>
</tbody>
</table>

* When tested at RT under 100 mA to 2.0 V

2.5. Cell impedance: Less than 100 mOhm @ 1 kHz at room temperature.
2.6. Performance Data:

**Discharge capability at RT**

![Discharge capability at RT graph]

**Pulse capability at RT**

![Pulse capability at RT graph]
Discharge capability @ 1 A at several temperatures

![Discharge capability @ 1 A at several temperatures](image)

Pulse capability @ 1 A at several temperatures

![Pulse capability @ 1 A at several temperatures](image)
2.7. End of life indication:

OCV measurements can provide a good estimation for the remaining capacity of the cell as shown below:

![Capacity vs. OCV](image)

Safety tests:

The cell has successfully passed the following safety tests:

- Short circuit at RT and at 55 °C.
- Oven at 130 °C.
- Impact.
- Over-charge and over-discharge.