

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*:

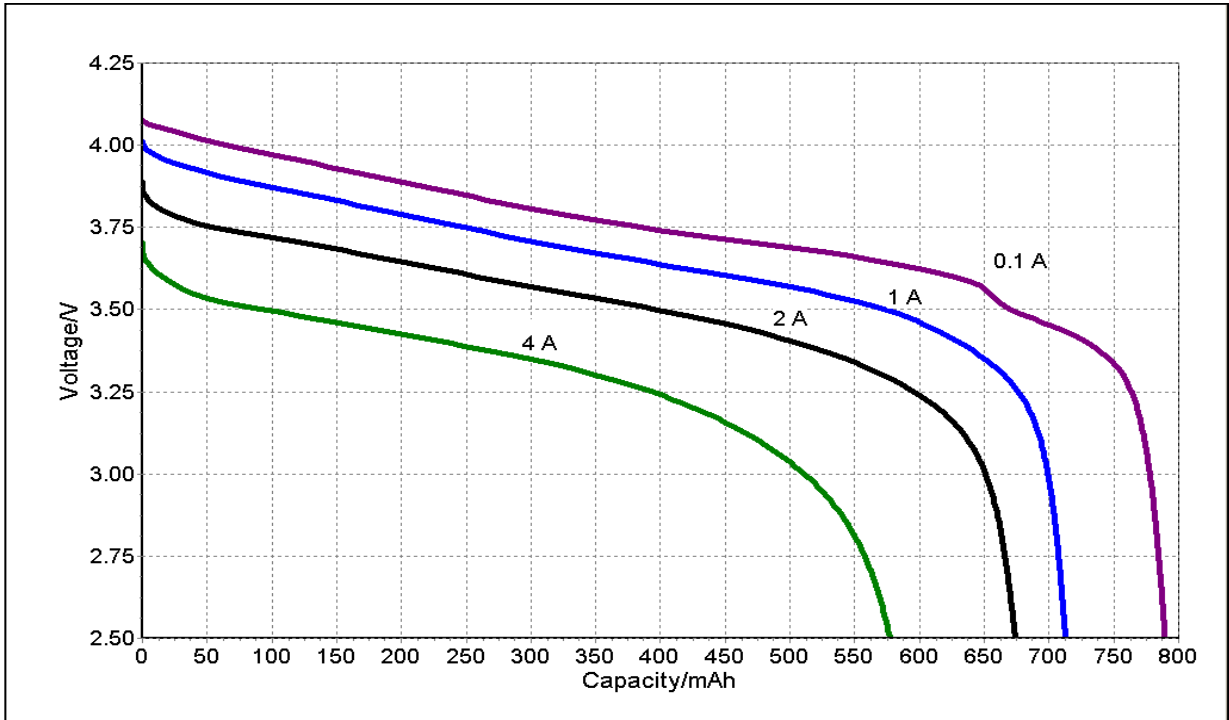
| Storage Temperature | 22 °C | 55 °C |
|---------------------|-------|-------|
| Storage Time [Y] | | |
| 1 | 2 % | 4 % |
| 5 | 5 % | 15 % |
| 10 | 7.5 % | 22 % |

* When tested at RT under 100 mA to 2.0 V

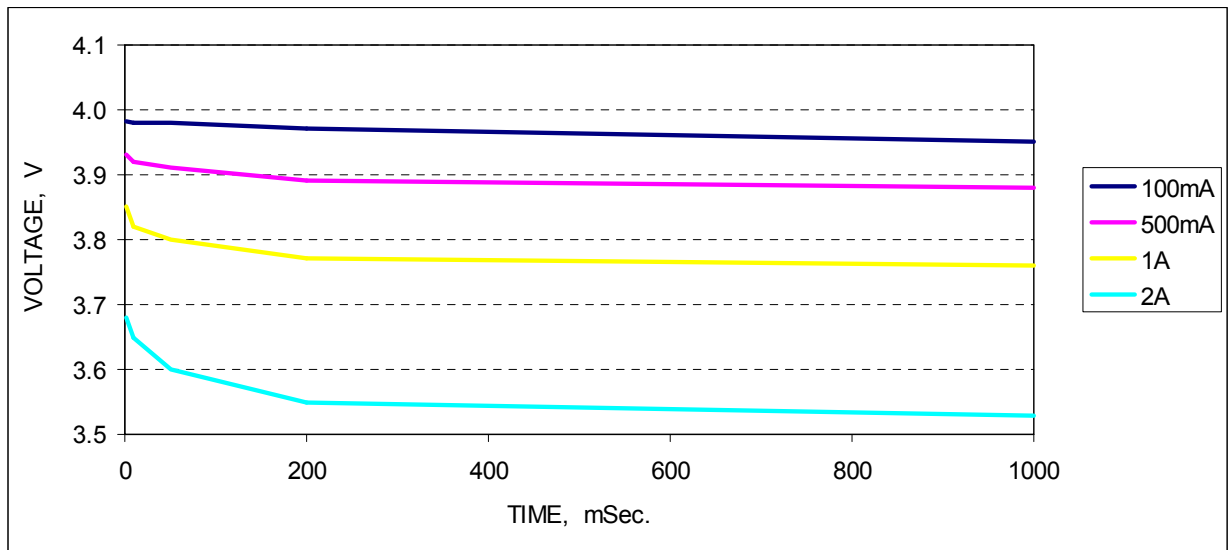
2.5. Cell impedance: Less than 100 mOhm @ 1 kHz at room temperature.

2.6. Performance Data:

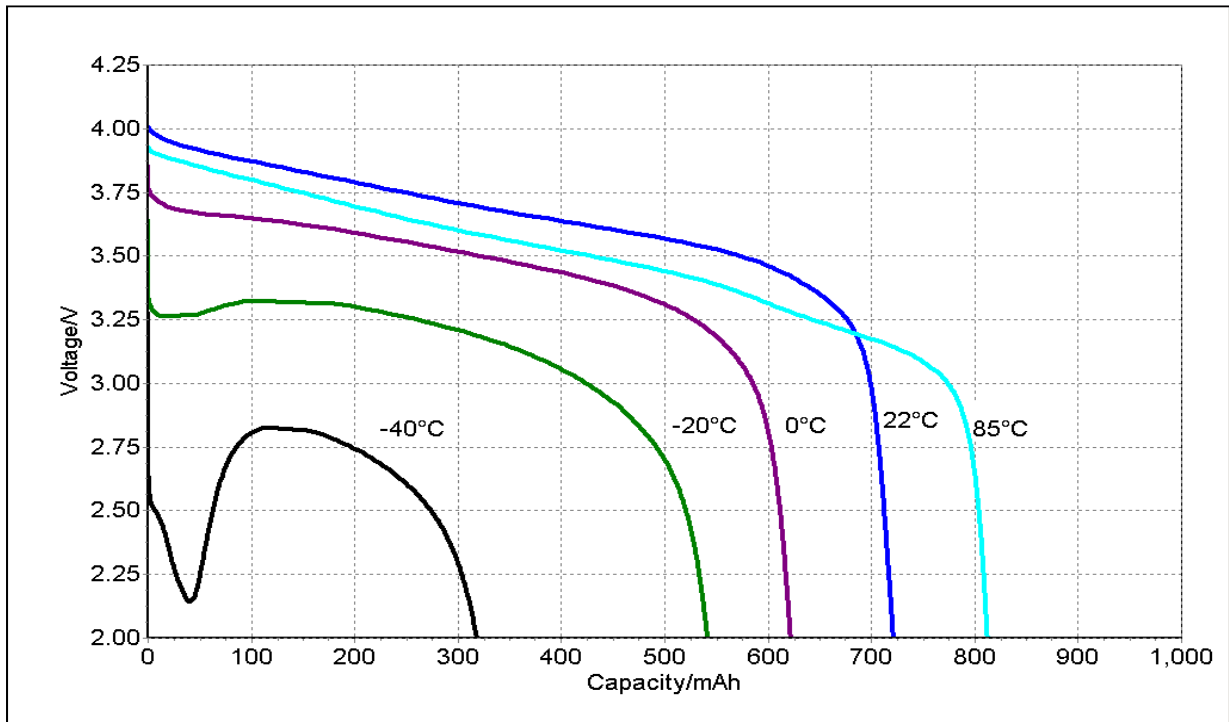
Discharge capability at RT



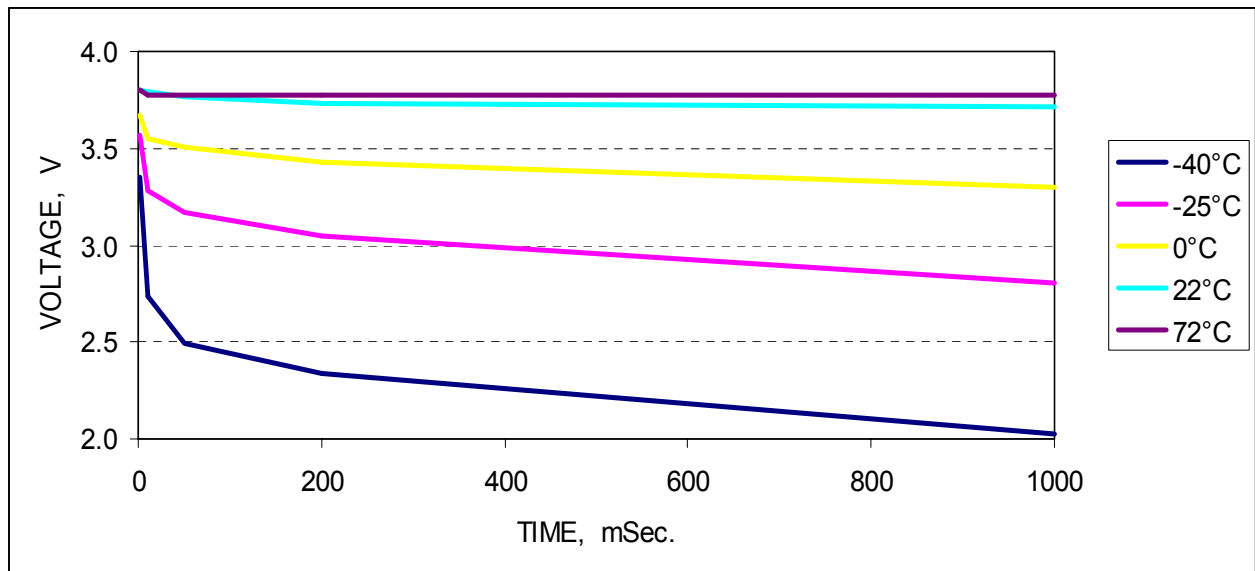
Pulse capability at RT



Discharge capability @ 1 A at several temperatures



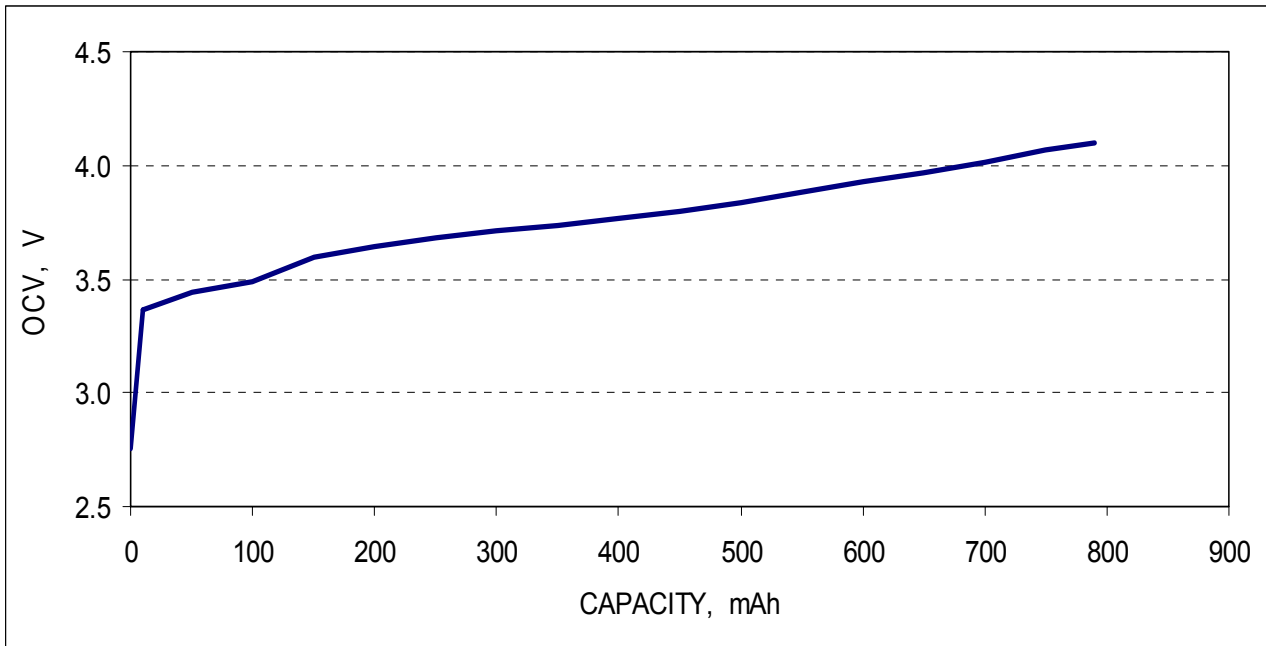
Pulse capability @ 1 A at several temperatures



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



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.