

Tadiran High Power Lithium Organic Cell Model TLM-1550HP

1. Scope

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

2. Characteristics

2.1. Physical

- 2.1.1. Length: 50.3 ± 0.3 mm.
- 2.1.2. Diameter: 15.1 mm. max.
- 2.1.3. Weight: 19.2 ± 0.3 gr.

2.2. Electrical

- 2.2.1. Open Circuit Voltage (for batteries stored at RT for 1 year or less) 3.95 to 4.07V
- 2.2.2. Closed Circuit Voltage (at 0.1 sec) at 0.5A load 3.88V minimum
- 2.2.3. Discharge
 - Discharge capacity at 50mA @ RT to 2.8V 550 mAh
 - Maximum discharge current
 - Continuous to 2.8V: 5.0 A
 - 1 second pulse to 3V: 15.0 A

- 2.3. Operating Temperature Range: -40⁰C to 85⁰C

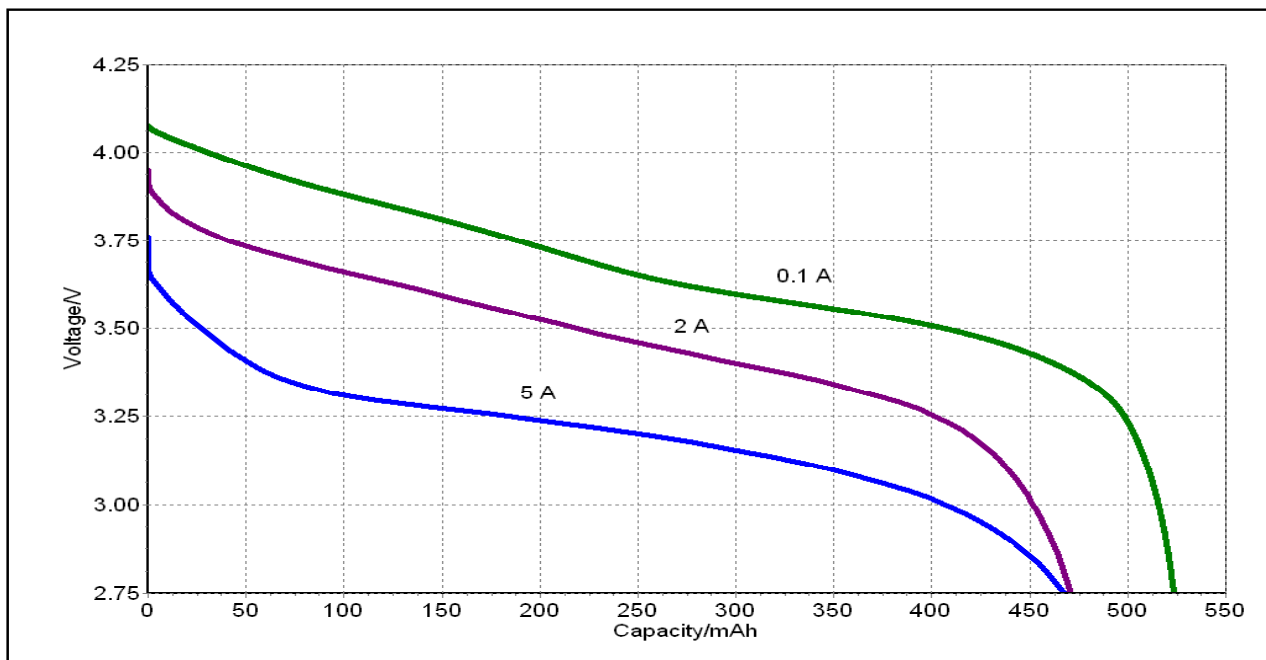
- 2.4. Self discharge current:

Temperature [°C]	Self-discharge rate [μA]
22	2.5
35	5
42	5.5
55	6
72	10
85	15

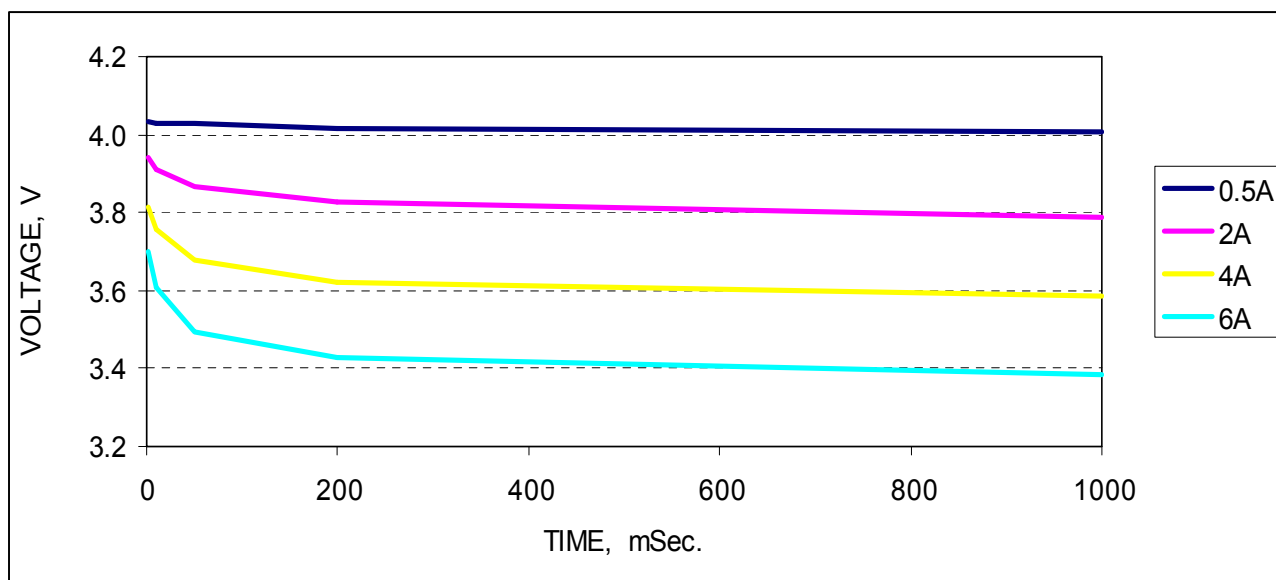
- 2.5. Cell impedance: Less than 100 mOhm @ 1kHz at room temperature.

2.6. Performance Data:

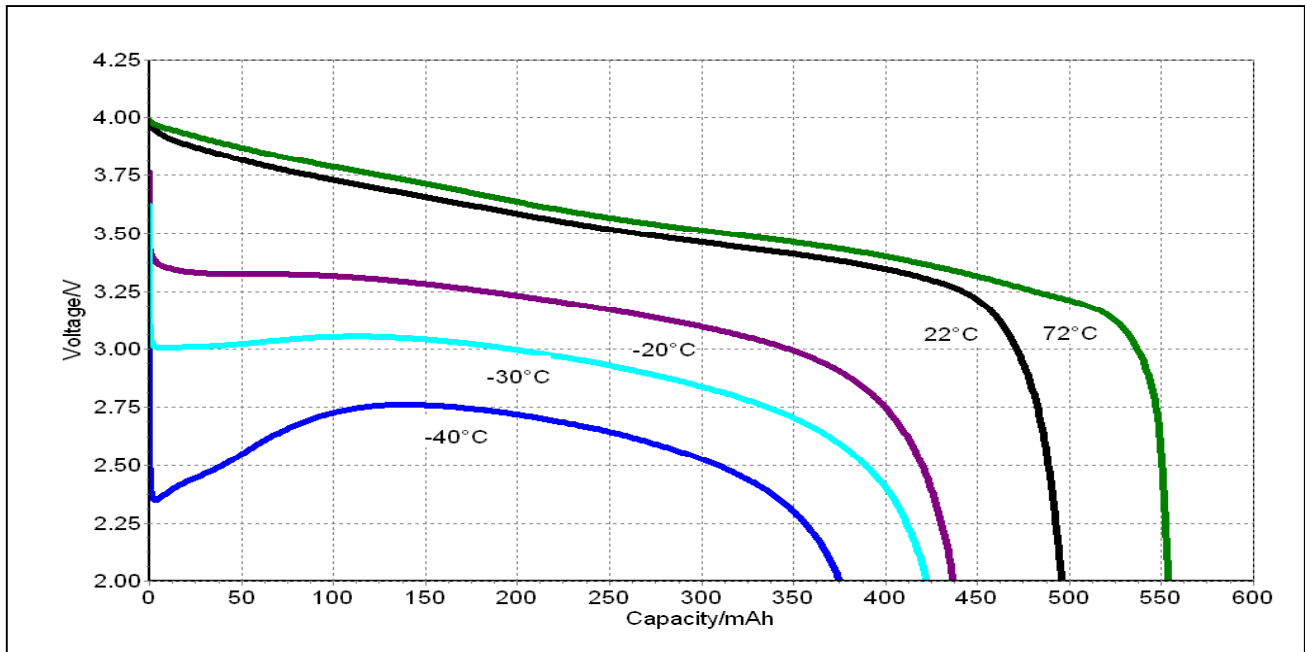
Discharge capability at RT



Pulse capability at RT

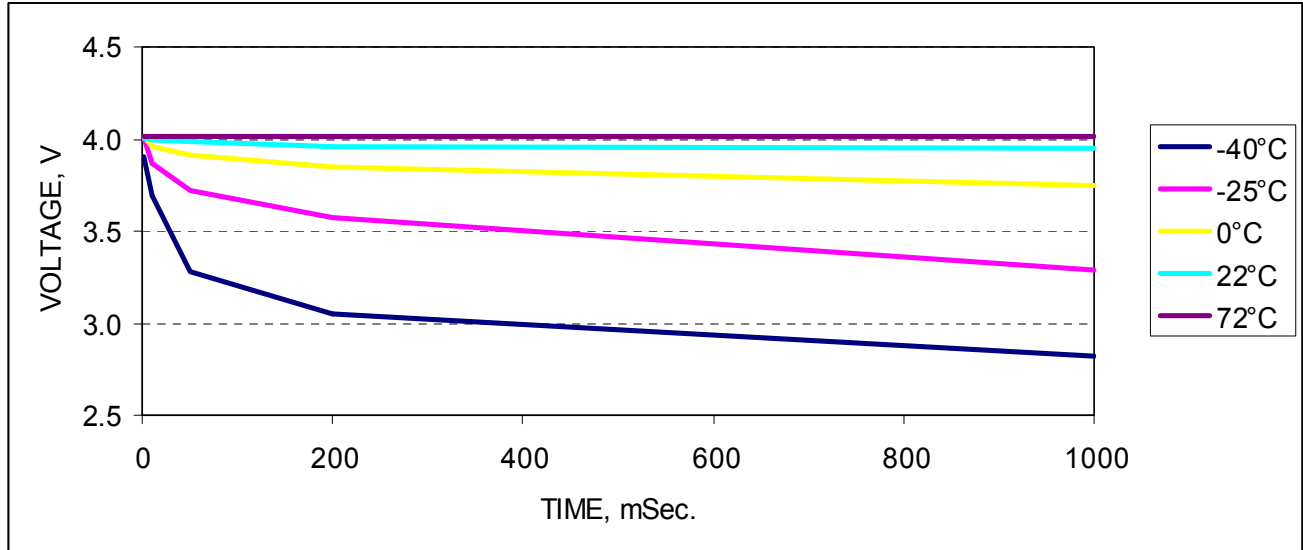


Discharge capability @ 1A at several temperatures



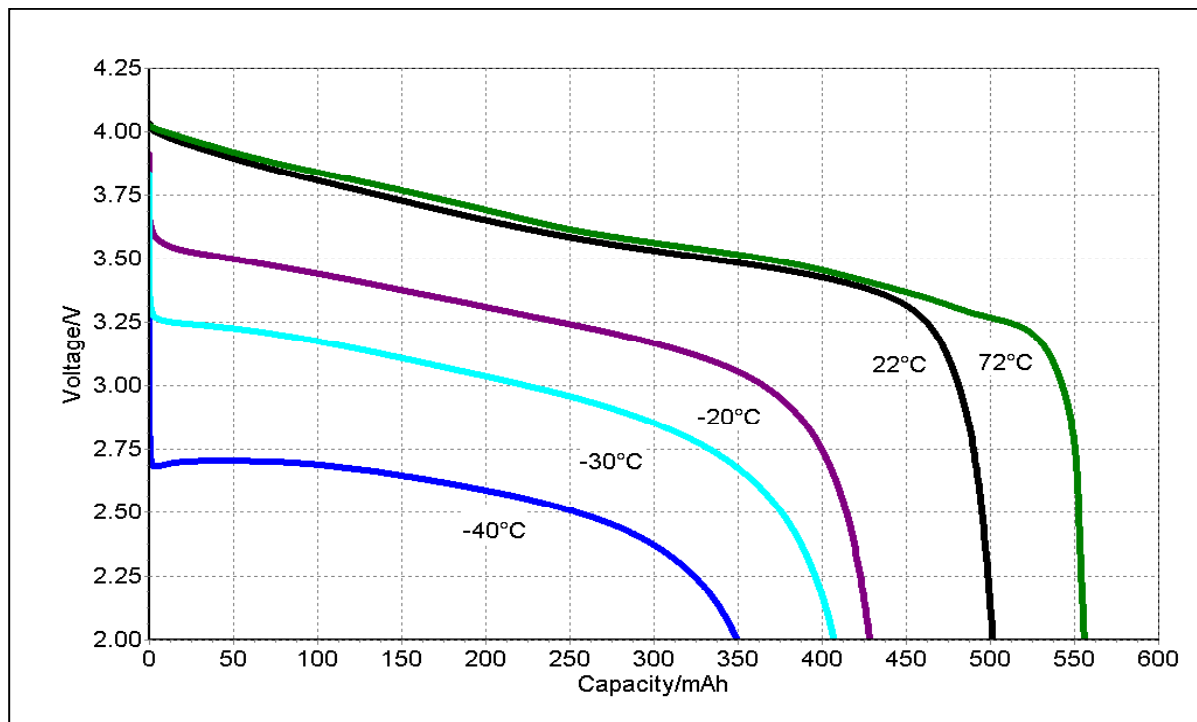
* Performance at 85°C is close to that at 72°C

Pulse capability @ 1A at several temperatures



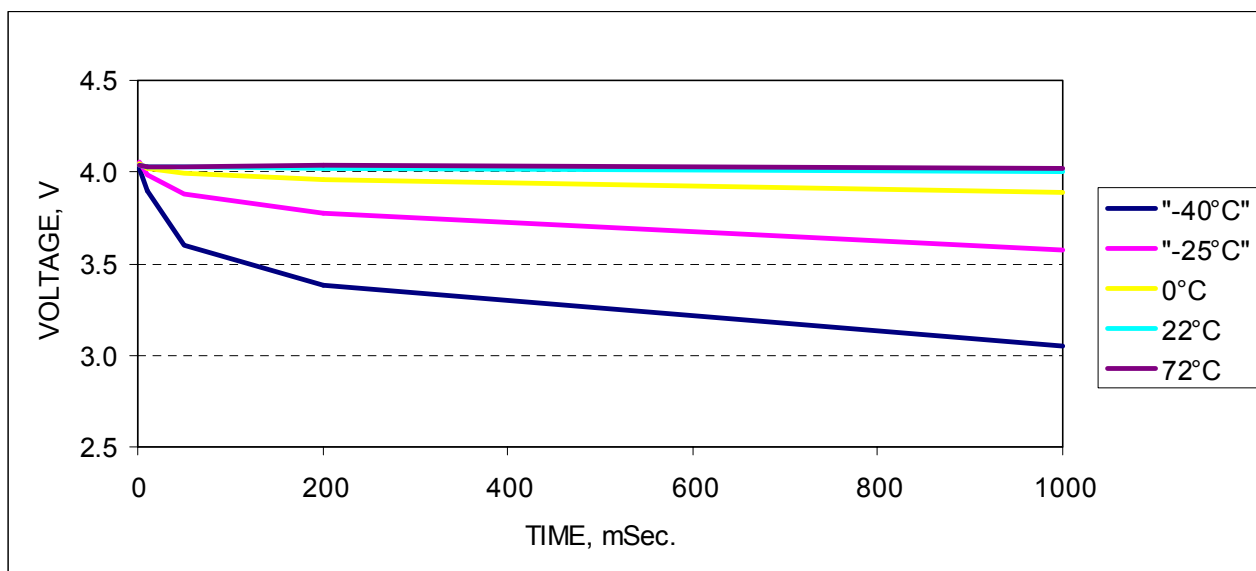
* Performance at 85°C is close to that at 72°C

Discharge capability @ 0.5A at several temperatures



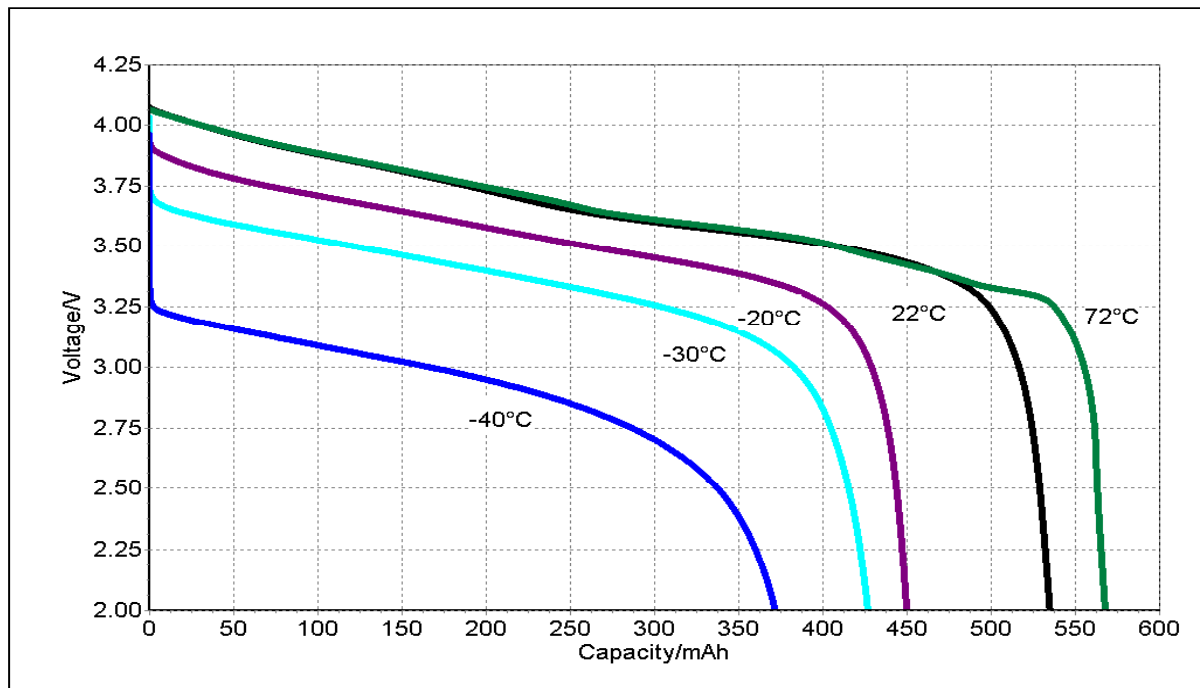
* Performance at 85°C is close to that at 72°C

Pulse capability @ 0.5A at several temperatures



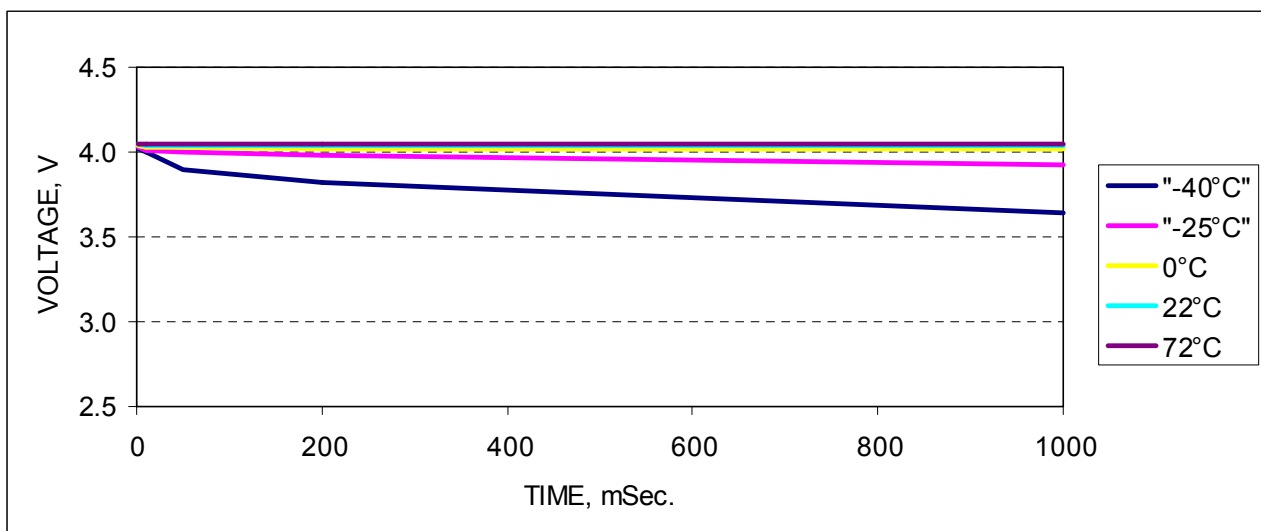
* Performance at 85°C is close to that at 72°C

Discharge capability @ 0.1A at several temperatures



* Performance at 85°C is close to that at 72°C

Pulse capability @ 0.1A at several temperatures

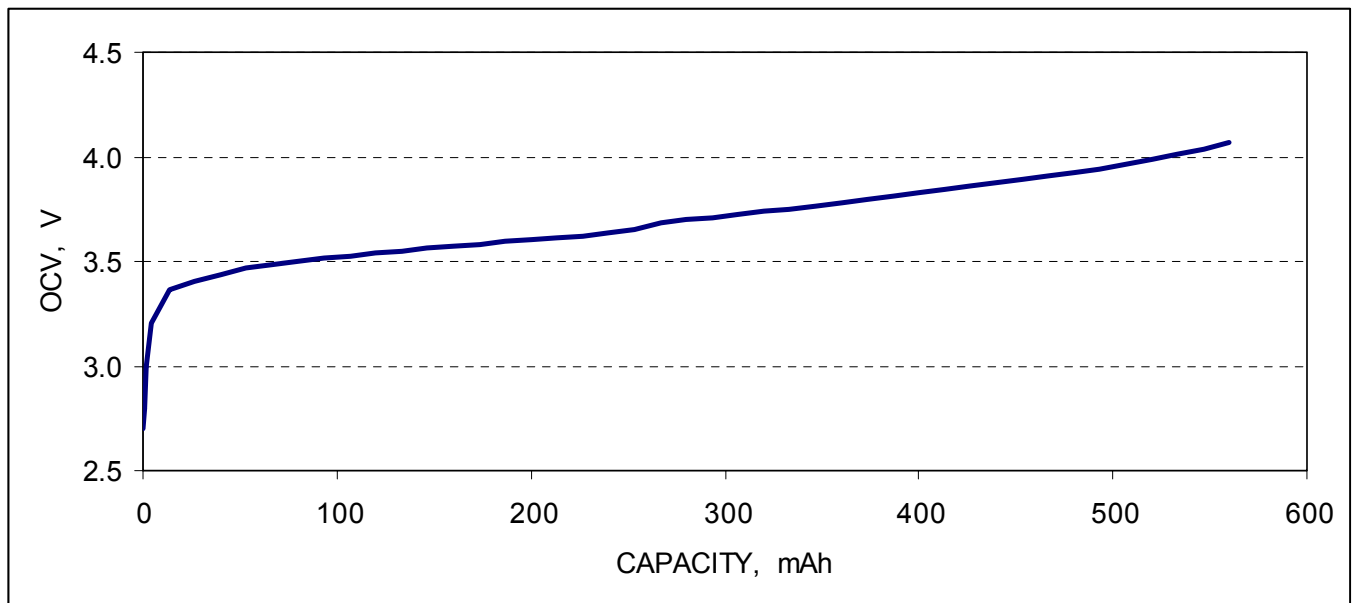


* Performance at 85°C is close to that at 72°C

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



2.8. Safety tests:

The cell has successfully passed the following safety tests:

- Short circuit at RT and at 55°C
- Oven at 150°C
- Impact
- Nail penetration
- Over charge and over discharge