

Tadiran High Power Lithium Organic Cell Model TLM-1530HP

1. Scope

This data sheet describes the mechanical design and performance of Tadiran high power lithium organic cell model TLM-1530HP.

2. Characteristics

2.1. Physical

2.1.1. Length: 26.9 ± 0.4 mm. 2.1.2. Diameter: 14.8 ± 0.2 mm. 2.1.3. Weight: 11 gr. max.

2.2. Electrical

2.2.1. Open Circuit Voltage 3.95 to 4.07 V

(for batteries stored at RT for 1 year or less)

2.2.2. Closed Circuit Voltage (at 0.1 sec) at 0.5 A load 3.83 V minimum

2.2.3. Discharge

Discharge capacity at 20 mA @ RT to 2.8 V 240 mAh Discharge capacity at 225 mA @ RT to 2.8 V 225 mAh

Maximum discharge current

Continuous to 2.8 V: 2.5 A 1 second pulse to 3 V: 6.5 A

2.3. Operating Temperature Range: -40 °C to 85 °C

2.4. Accumulated Capacity Loss:

Storage Temperature	22 °C	55 °C	72 °C	85 °C
Storage Time [Y]				
1	3 %	6 %	10 %	TBD
5	7 %	22 %	40 %	N/A
10	11 %	32 %	N/A	N/A
15	15 %	42 %	N/A	N/A
20	18 %	N/A	N/A	N/A

^{*} When tested at RT under 20 mA to 2.8 V

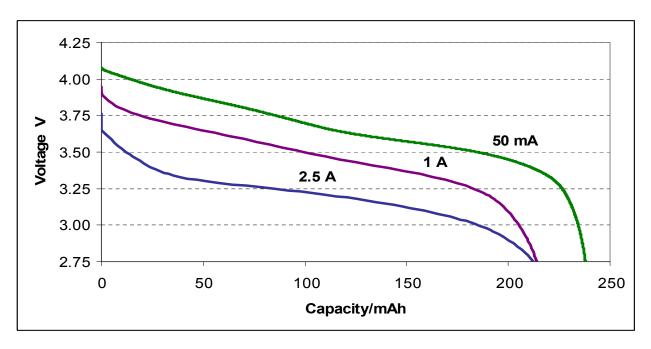
2.5. Cell impedance: Less than 175 mOhm @ 1kHz at room temperature.

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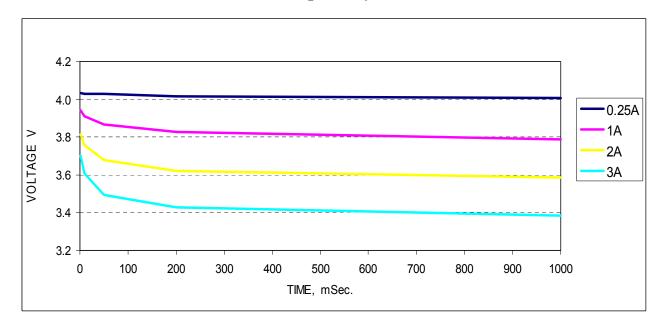


2.6. Performance Data:

Discharge capability at RT



Pulse capability at RT



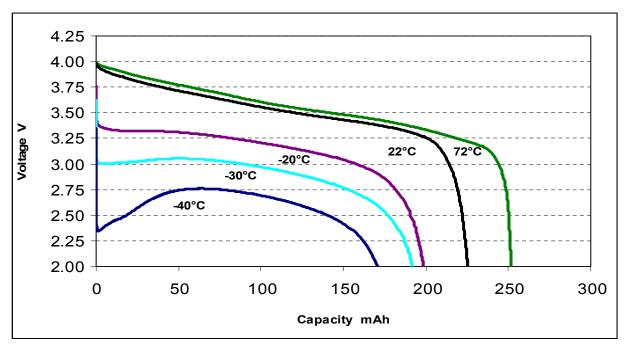
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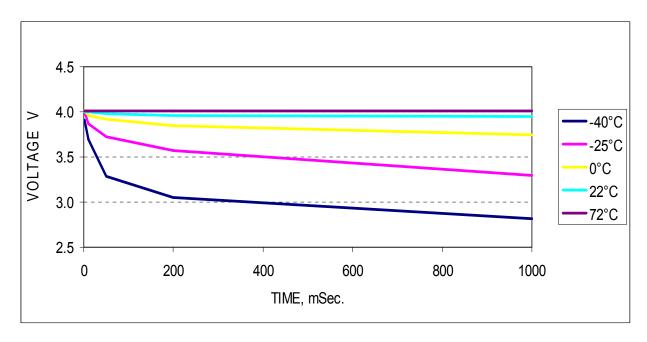


Discharge capability @0.5A at several temperatures



^{*} 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

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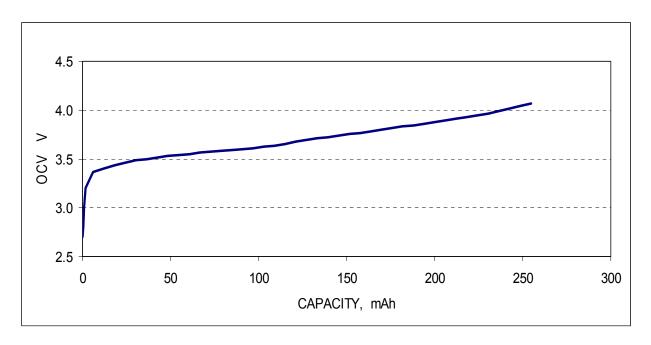
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2.7. End of life indication:

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 successfuly passed the following safety tests:

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