

Tadiran High Power Lithium Organic Cell Model TLM-1520HP

1. Scope

This data sheet describes the mechanical design and performance of Tadiran high power lithium organic cell model TLM-1520HP.

2. Characteristics

2.1. Physical

2.1.1. Length: 20 -1 mm. 2.1.2. Diameter: 14.8 ±0.3 mm. 2.1.3. Weight: 9 gr. max.

2.2. Electrical

2.2.1. Open Circuit Voltage (for batteries stored at RT for 1 year or less)

3.95 to 4.07 V

2.2.2. Closed Circuit Voltage (at 0.1 sec) at 0.25 A load 3.78 minimum

2.2.3. Discharge

Discharge capacity at 12 mA @ RT to 2.8 V 135 mAh

Discharge capacity at 125 mA @ RT to 2.8 V 125 mAh

Maximum discharge current

Continuous to 2.8 V: 1.25 A 1 second pulse to 3 V: 3.5 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

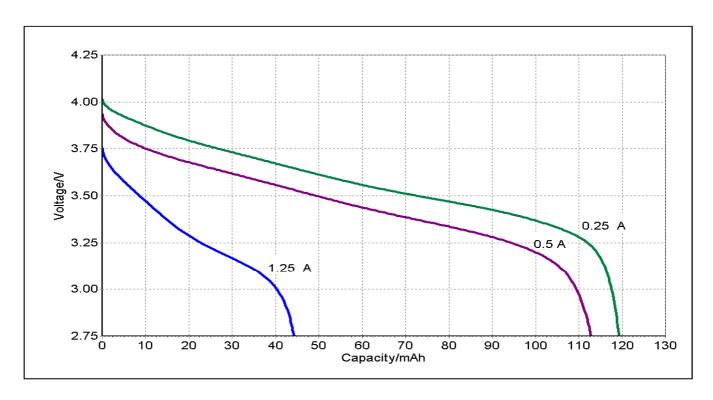
^{*} When tested at RT under 12 mA to 2.8 V

2.5. Cell impedance: Less than 250 mOhm @ 1kHz at room temperature.

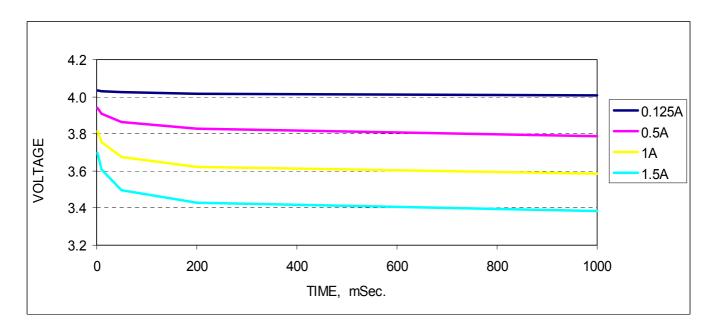


2.6. Performance Data:

Discharge capability at RT

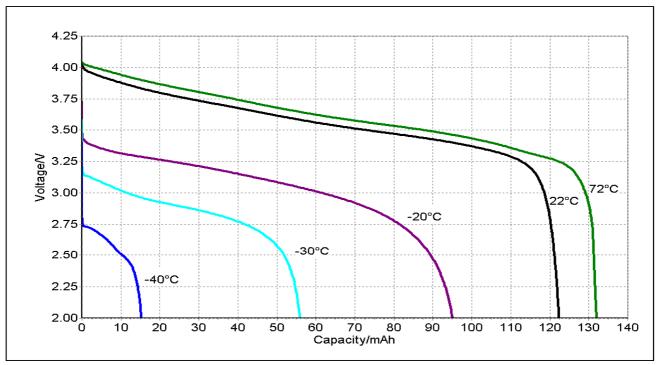


Pulse capability at RT



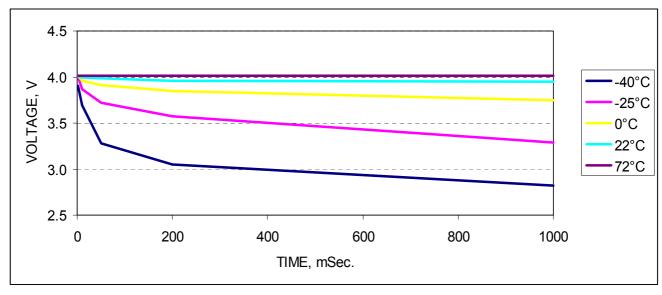


Discharge capability @ 0.25A at several temperatures



^{*} Performance at 85°C is close to that at 72°C

Pulse capability @ 0.25A at several temperatures



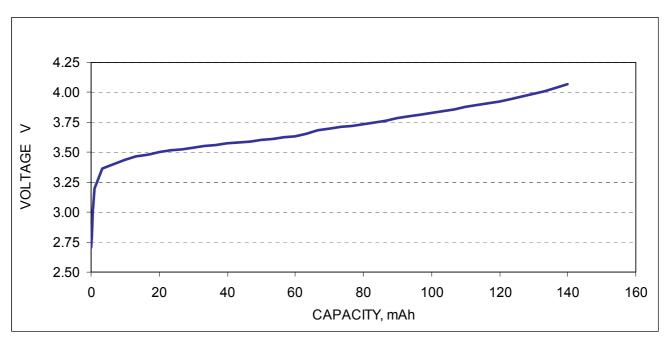
^{*} Performance at 85°C is close to that at 72°C



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 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