

Tadiran High Power Lithium Organic Cell Model TLM-1550HPM

1. Scope

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

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 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 Circu	3.88 V minimum					
2.2	2.2.3. Discharge							
Discharge capacity at 20 mA @ RT to 2.8 V				500 mAh				
	420 mAh							
Maximum discharge current								
Continuous to 2.5 V: 7 A								
1 second pulse to 2.6 V: 15 A								
2.3. Operating Temperature Range: -40 $^{\circ}C$ to 85 $^{\circ}C$								

2.4. Acumulated 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 at 5 mA to 2.8 V

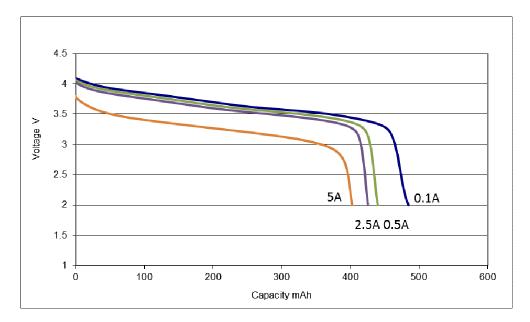
2.5. Cell impedance: Less than 100 mOhm @ 1kHz at room temperature.

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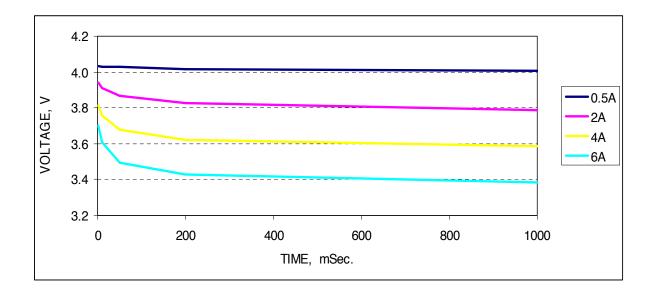


2.6. Performance Data (Typical results for up to 5 years old cells):



Discharge capability at RT

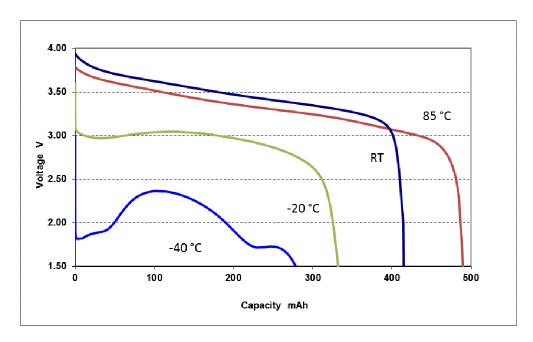
Pulse capability at RT



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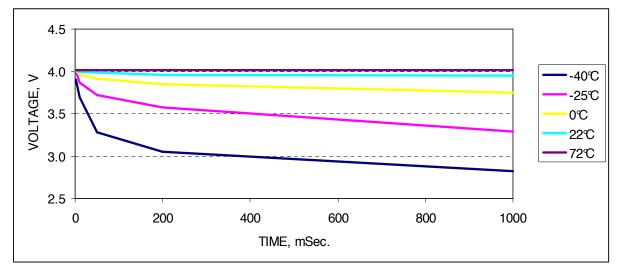
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Discharge capability @ 2A at several temperatures

Pulse capability @ 1A at several temperatures



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

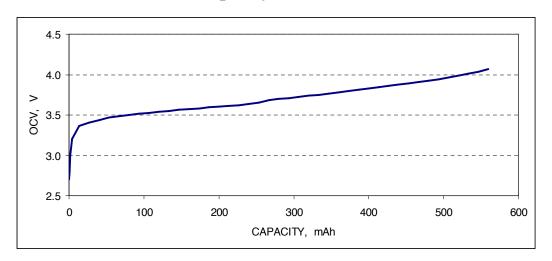
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2.7. End of life indication:

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 succesfuly 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 (200% at currents up to 2A)

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