

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

Length:

Diameter:

Weight:

51 -1 mm.

20 gr. max.

14.8 ±0.3 mm.

2.1. Physical

2.1.1.

2.1.2.

2.1.3.

2.2. Ele	ectrical	
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 2.8 V	800 mAh
	Discharge capacity at 500 mA @ RT to 2.8 V	700 mAh
	Maximum discharge current	
	Continuous to 2.8 V:	4 A
	1 second pulse to 3 V:	15 A
2.3. Opera	ting Temperature range:	$-40 \ {}^{0}C$ to 85 $\ {}^{0}C$

2.3. Operating Temperature range:

2.4. Accumulated Capacity Loss*:

Storage Temperature	22 °C	55 °C	72 °C	85 °C
Storage Time [Y]				
1	2 %	4 %	7 %	TBD
5	5 %	15 %	28 %	N/A
10	7.5 %	22 %	N/A	N/A
15	10 %	29 %	N/A	N/A
20	12.5 %	N/A	N/A	N/A

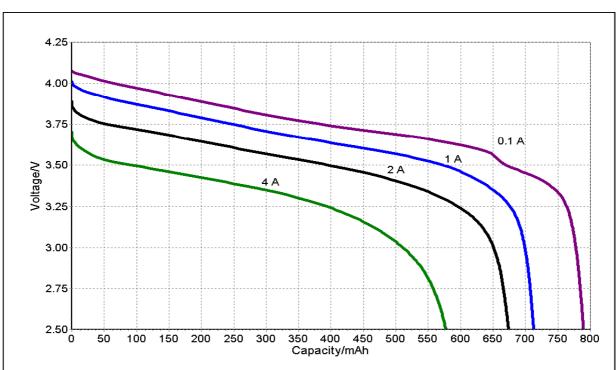
- When tested at RT under 100 mA to 2.8 V
- 2.5. Cell impedance: Less than 100 mOhm @ 1 kHz at room temperature.

Rev F, Sept 2006 (ECN 6100539)

THE INFORMATION PROVIDED HERE IS NECESSARILY OF A GENERAL NATURE. SINCE SPECIFIC PERFORMANCE DEPENDS ON ACTUAL OPERATING AND STORAGE CONDITIONS, OUR ENGINEERS WILL PROVIDE PARTICULAR APPLICATION INSTRUCTIONS UPON REQUEST. DATA SUBJECT TO REVISION WITHOUT NOTICE. ANY REPRESENTATION IN THIS BROCHURE CONCERNING PERFORMANCE ARE FOR INFORMATION PURPOSES ONLY AND NOT WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF FUTURE PERFORMANCE. TADIRAN'S STANDARD LIMITED WARRANTY, STATED IN ITS SALES CONTRACT OR ORDER CONFIRMATION FORM IS THE ONLY WARRANTY OFFERED BY TADIRAN.

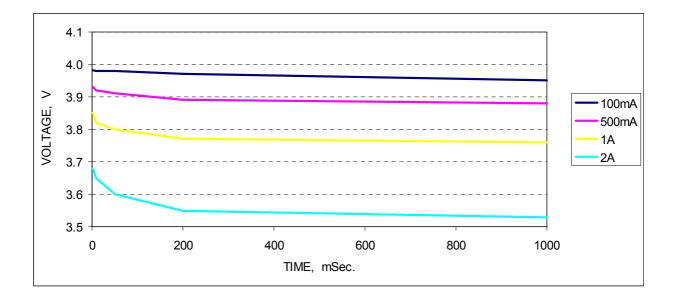


2.6. Performance Data:



Discharge capability at RT

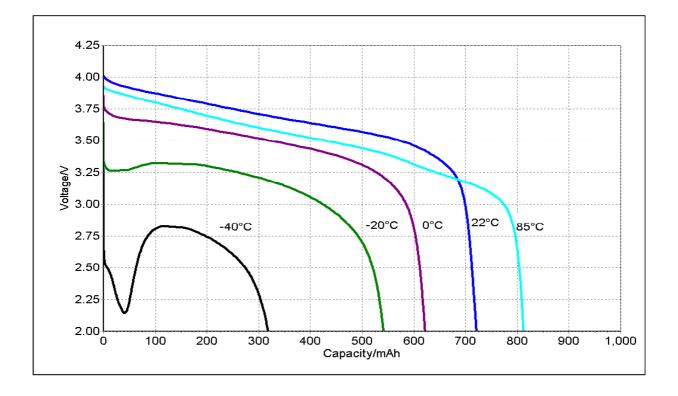
Pulse capability at RT



Rev F, Sept 2006 (ECN 6100539)

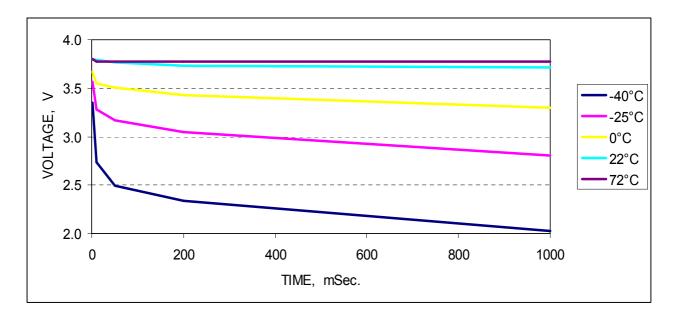
THE INFORMATION PROVIDED HERE IS NECESSARILY OF A GENERAL NATURE. SINCE SPECIFIC PERFORMANCE DEPENDS ON ACTUAL OPERATING AND STORAGE CONDITIONS, OUR ENGINEERS WILL PROVIDE PARTICULAR APPLICATION INSTRUCTIONS UPON REQUEST. DATA SUBJECT TO REVISION WITHOUT NOTICE. ANY REPRESENTATION IN THIS BROCHURE CONCERNING PERFORMANCE ARE FOR INFORMATION PURPOSES ONLY AND NOT WARRANTIES, ETHER EXPRESSED OR IMPLIED, OF FUTURE PERFORMANCE. TADIRAN'S STANDARD LIMITED WARRANTY, STATED IN ITS SALES CONTRACT OR ORDER CONFIRMATION FORM IS THE ONLY WARRANTY OFFERED BY TADIRAN.





Discharge capability @ 1A at several temperatures

Pulse capability @ 1A at several temperatures



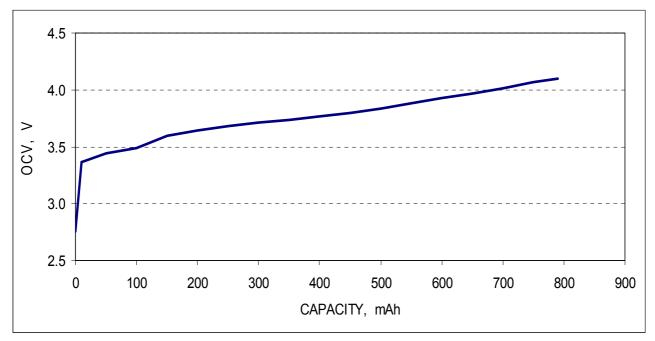
Rev F, Sept 2006 (ECN 6100539)

THE INFORMATION PROVIDED HERE IS NECESSARILY OF A GENERAL NATURE. SINCE SPECIFIC PERFORMANCE DEPENDS ON ACTUAL OPERATING AND STORAGE CONDITIONS, OUR ENGINEERS WILL PROVIDE PARTICULAR APPLICATION INSTRUCTIONS UPON REQUEST. DATA SUBJECT TO REVISION WITHOUT NOTICE. ANY REPRESENTATION IN THIS BROCHURE CONCERNING PERFORMANCE ARE FOR INFORMATION PURPOSES ONLY AND NOT WARRANTIES, ETHER EXPRESSED OR IMPLIED, OF FUTURE PERFORMANCE. TADIRAN'S STANDARD LIMITED WARRANTY, STATED IN ITS SALES CONTRACT OR ORDER CONFIRMATION FORM IS THE ONLY WARRANTY OFFERED BY TADIRAN.



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 succesfuly passed the following safety tests:

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

Rev F, Sept 2006 (ECN 6100539)

THE INFORMATION PROVIDED HERE IS NECESSARILY OF A GENERAL NATURE. SINCE SPECIFIC PERFORMANCE DEPENDS ON ACTUAL OPERATING AND STORAGE CONDITIONS, OUR ENGINEERS WILL PROVIDE PARTICULAR APPLICATION INSTRUCTIONS UPON REQUEST. DATA SUBJECT TO REVISION WITHOUT NOTICE. ANY REPRESENTATION IN THIS BROCHURE CONCERNING PERFORMANCE ARE FOR INFORMATION PURPOSES ONLY AND NOT WARRANTIES, ETHER EXPRESSED OR IMPLIED, OF FUTURE PERFORMANCE. TADIRAN'S STANDARD LIMITED WARRANTY, STATED IN ITS SALES CONTRACT OR ORDER CONFIRMATION FORM IS THE ONLY WARRANTY OFFERED BY TADIRAN.