

## 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. FII	ysical			
2.1.1.	Length:	$50.3 \pm 0.3$ mm.		
2.1.2.	Diameter:	15.1 mm. max.		
2.1.3.	Weight:	$19.2 \pm 0.3$ gr.		
2.2. Ele	ectrical			
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				
	Disch	arge 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: $-40^{\circ}$ C to $85^{\circ}$ C				

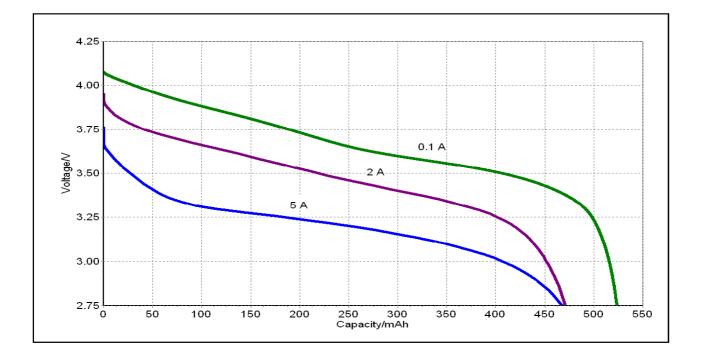
2.4. Self discharge current:

Temperature	Self-discharge rate	
[°C]	[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.

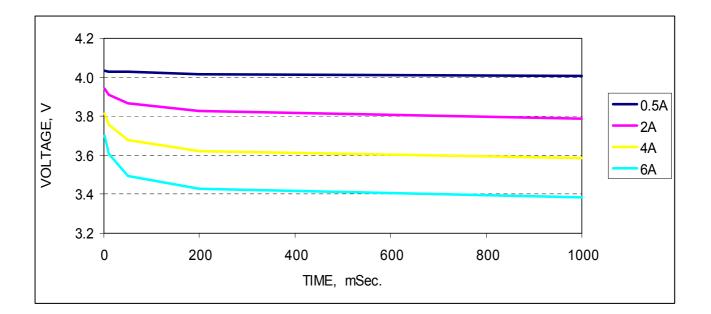


#### 2.6. Performance Data:



## Discharge capability at RT

Pulse capability at RT

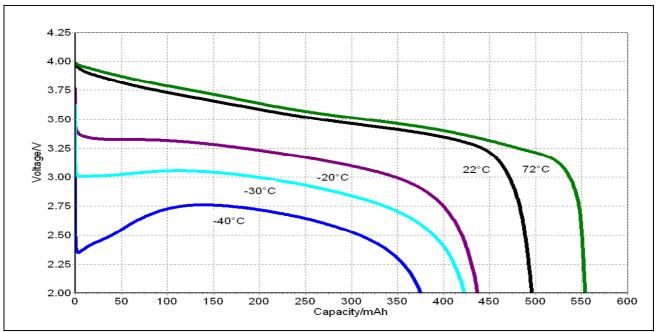


#### Rev 4, May 2005

Page 2 of 6

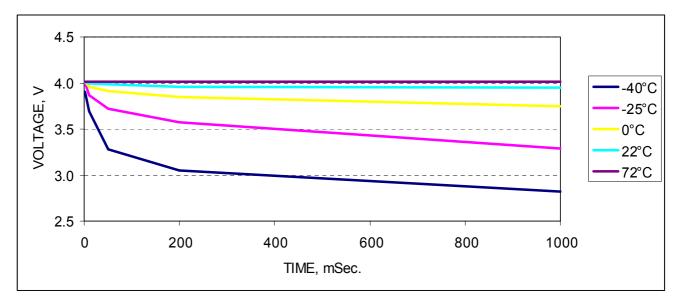
THE INFORMATION PROVIDED HERE IS NECESSARILY OF A GENERAL NATURE. SINCE SPECIFIC PERFORMANCE DEPENDS ON ACTUAL OPERATING AND STORAGE CONDITIONS, OUR ENGINEERS WILL PROVIDE PARTICULAR APPLICATION INSTRUCTIONS UPON REQUEST. DATA SUBJECT TO REVISION WITHOUT NOTICE. ANY REPRESENTATION IN THIS BROCHURE CONCERNING 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.





## Discharge capability @ 1A at several temperatures

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

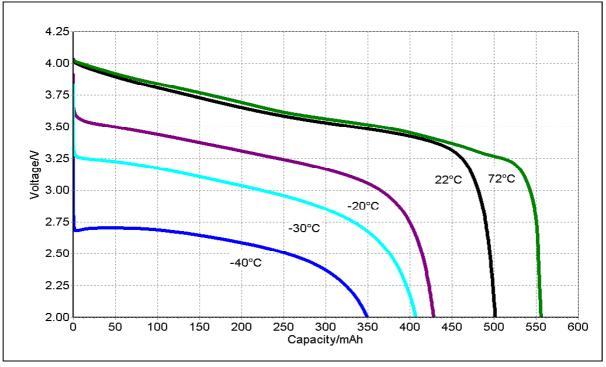


## Pulse capability @ 1A at several temperatures

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

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 WARRANTES, 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.

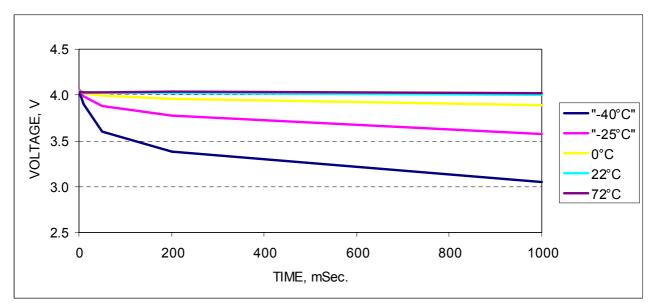




Discharge capability @ 0.5A at several temperatures

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



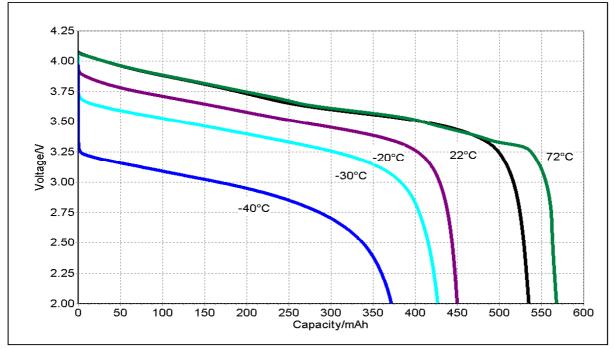


\* Performance at 85°C is close to that at 72°C

#### Rev 4, May 2005

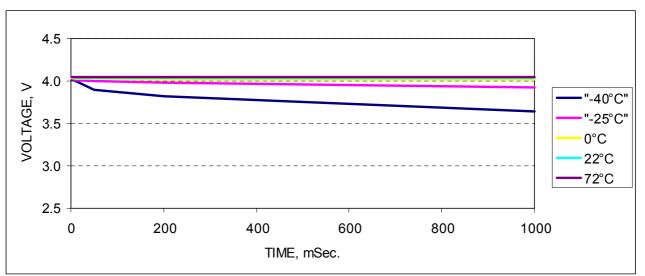
THE INFORMATION PROVIDED HERE IS NECESSARILY OF A GENERAL NATURE. SINCE SPECIFIC PERFORMANCE DEPENDS ON ACTUAL OPERATING AND STORAGE CONDITIONS, OUR ENGINEERS WILL PROVIDE PARTICULAR APPLICATION INSTRUCTIONS UPON REQUEST. DATA SUBJECT TO REVISION WITHOUT NOTICE. ANY REPRESENTATION IN THIS BROCHURE CONCERNING PERFORMANCE ARE FOR INFORMATION PURPOSES ONLY AND NOT WARRANTES, 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.





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

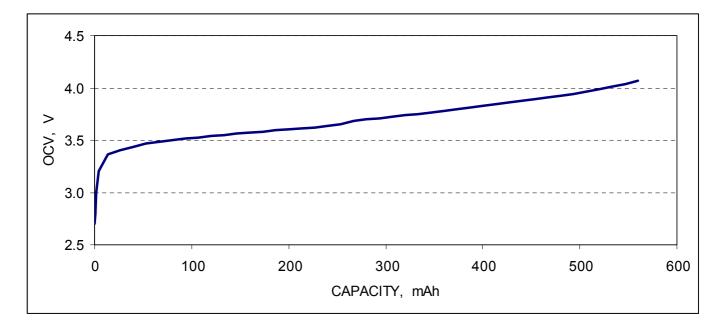
\* Performance at 85°C is close to that at 72°C

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.



### 2.7. 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

#### Rev 4, May 2005

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.