

# 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

2.1.1. Length: 50.2± 0.3 mm.
 2.1.2. Diameter: 15.0 mm. max.

2.1.3. Weight:  $20 \pm 0.2$  gr.



#### 2.2. Electrical

2.2.1. Discharge

Discharge capacity at 50mA @ RT 550mAh

Maximum discharge current: Continuous: 5.0 A

Pulse: 15 A

2.2.2. Operating Temperature range:  $-40^{\circ}$ C to  $85^{\circ}$ C

2.2.3. Self discharge current:

Temperature	Self-discharge rate [µA]
22	[μΑ]
35	5
42.	5.5
55	6
72	10
85	TBD

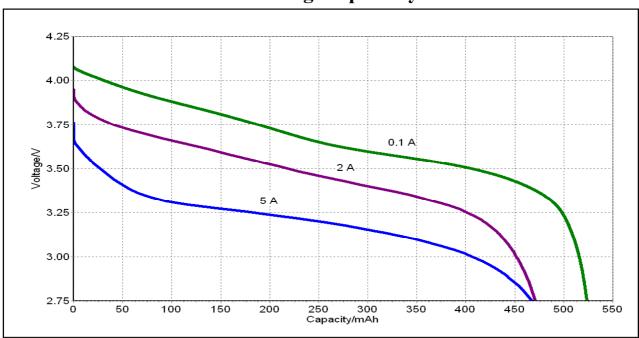
2.2.4. Capacity loss 1<sup>st</sup> year: 40mAh
Annual capacity loss: 15mAh

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

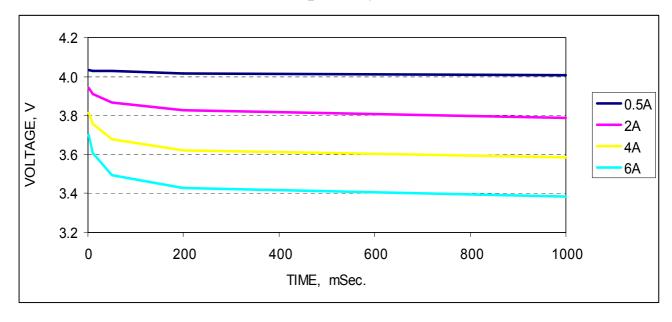


#### 2.2.6. Performance Data:

# Discharge capability at RT

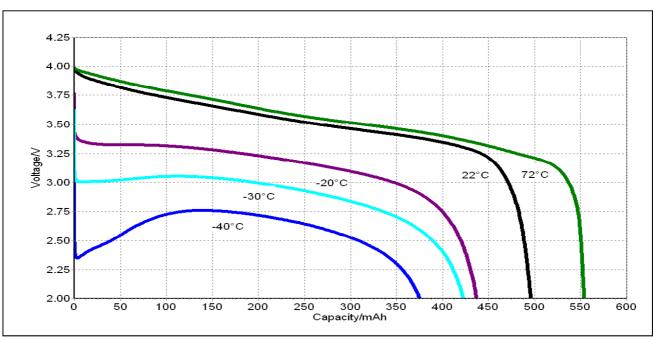


## Pulse capability at RT



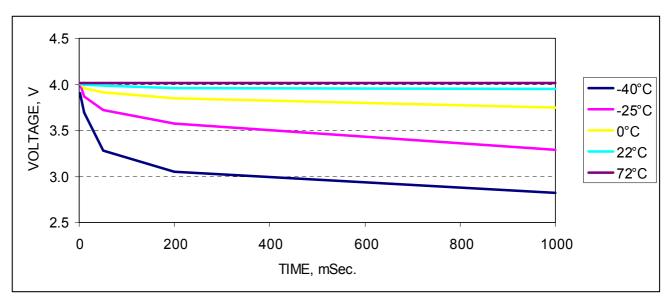


### Discharge capability @ 1A at several temperatures



The data for 85C is same as for 72C

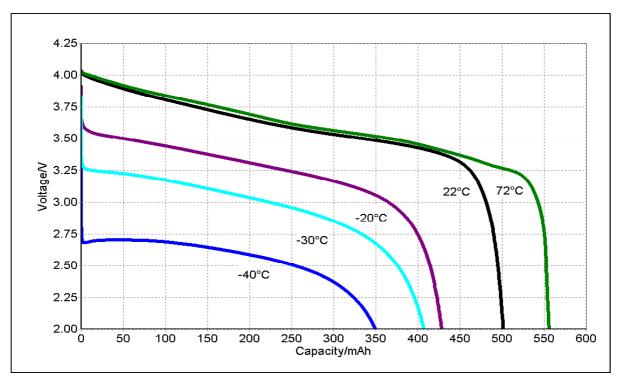
## Pulse capability @ 1A at several temperatures



The data for 85C is same as for 72C

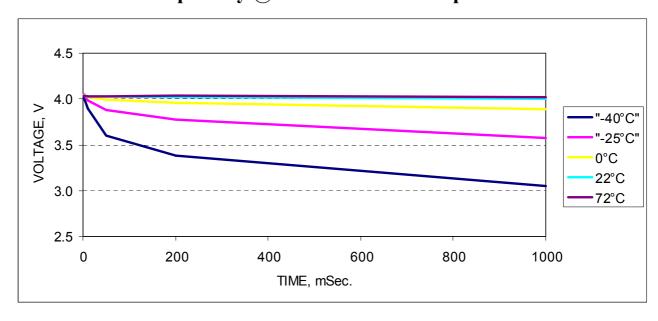


#### Discharge capability @ 0.5A at several temperatures



The data for 85C is same as for 72C

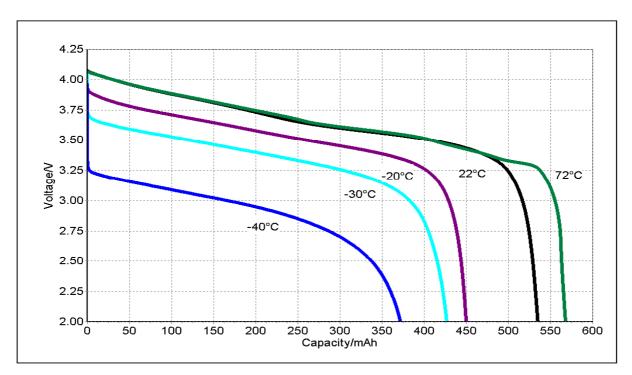
## Pulse capability @ 0.5A at several temperatures



The data for 85C is same as for 72C

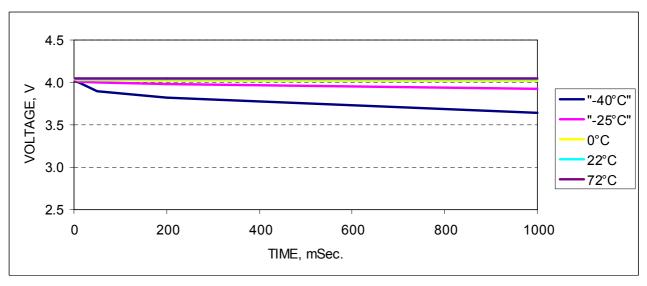


## Discharge capability @ 0.1A at several temperatures



The data for 85C is same as for 72C

# Pulse capability @ 0.1A at several temperatures



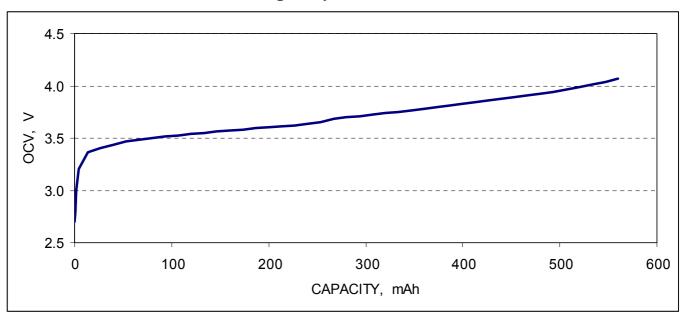
The data for 85C is same as for 72C



#### **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 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.