

# TLM-1550M



## AA Size High Power Primary Li Metal Oxide Cell - Military Grade

Notice: The application load profile has to be approved by Tadiran.



### Physical Characteristics

Length	51 mm. max
Diameter	15.1 mm. max
Weight	20 gr. max

### Electrical Characteristics (for batteries stored at RT for 1 year or less)

Open Circuit Voltage	3.95 to 4.07 V
Closed Circuit Voltage at 0.1 sec on 0.5A load	3.88 V minimum

#### Discharge

Capacity under 20 mA at RT to 2.8 V	470 mAh
Capacity under 500 mA at RT to 2.8 V	425 mAh

Maximum Discharge Current	
Continuous to 2.5 V	4.3 A
1 second pulse to 2.0 V	15 A

Discharge temperature range	-40 to +85 °C
Storage temperature range	-55 to +85 °C
Cell impedance at RT	Less than 100 mΩ at 1 kHz

### Accumulated Capacity Loss\*

Storage Time (years)	Storage Temperature			
	22 °C	55 °C	72 °C	85 °C
1	3 %	6 %	10 %	N/A
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 20 mA to 2.8 V

### Environmental

### Compliance with military specifications

Vibration	MIL-STD 810G	Method 514.6
Shock	MIL-STD 810G	Method 516.6
Temperature Shock	MIL-STD 810G	Method 503.5
Salt fog	MIL-STD 810G	Method 509.5
Altitude	MIL-STD 810G	Method 500.5
Acceleration*	50,000 $g_n$ (theoretical), 20,000 $g_n$ (tested) (dependent on duration)	
Spinning*	30,000 rpm (dependent on duration)	

\* These specifications are subject to testing and confirmation based on application requirements.

### Safety Considerations

The cells successfully passed the following tests:	Tested according to:
Short circuit at RT & +57 °C	UN, IEC
Heating at 130 °C	UL, IEC
Forced Discharge	UL, UN, IEC
Crush	UL, IEC
Vibration	UN, IEC
Mechanical shock	UN, IEC
Standards referenced: UN Manual of Tests and Criteria Section 38.3, UL 1642, IEC 60086-4	

### Key Features

- High Power 4.0 V
- Hermetically sealed (glass-to-metal)
- Wide operating temperature range
- Low self discharge
- Long storage life
- High  $g_n$  survivability
- High homogeneity
- End of life indication capability
- High reliability
- Lightweight
- Safe design
- Assembled in custom packs (per request)

### Main Applications

- Ordnance fuzing power source
- Navigation systems
- Missile systems
- Telemetry
- Emergency systems
- Electronic warfare systems

### Ordering P/N

TLM-1550M/S	72-1456-22000
TLM-1550M/T	72-1456-22150
TLM-1550M/Z2/T *	72-1456-22200

\* Z2 indicates that the cell is equipped with PTC SRP 200

#### WARNING:

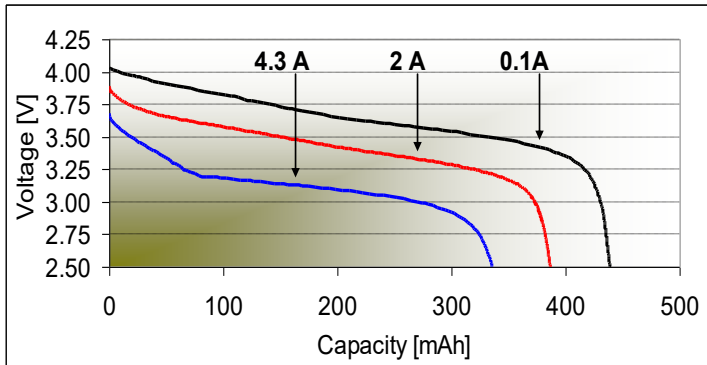
Fire, Explosion, And Severe Burn Hazard.  
Do Not Recharge, Crush, Disassemble,  
Heat Above 100°C, Short Circuit,  
Incinerate or Expose Contents to water.

[www.tadiranbatteries.com](http://www.tadiranbatteries.com)

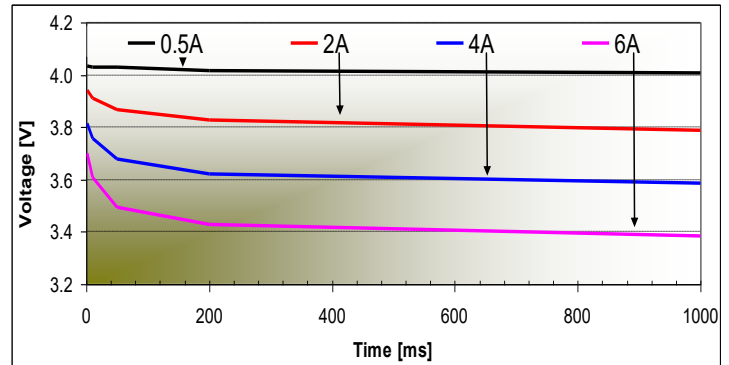
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## Performance Data

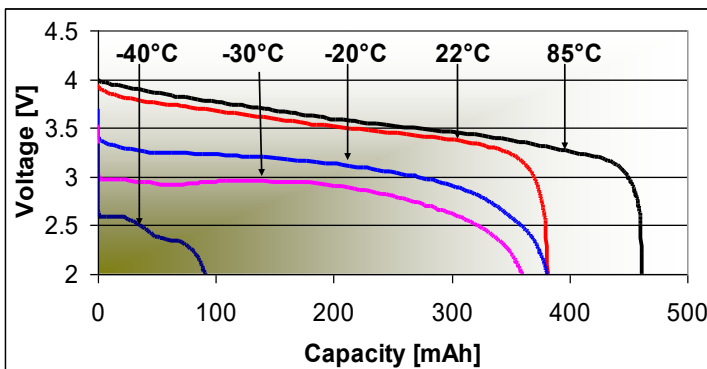
Discharge curves at Room Temperature



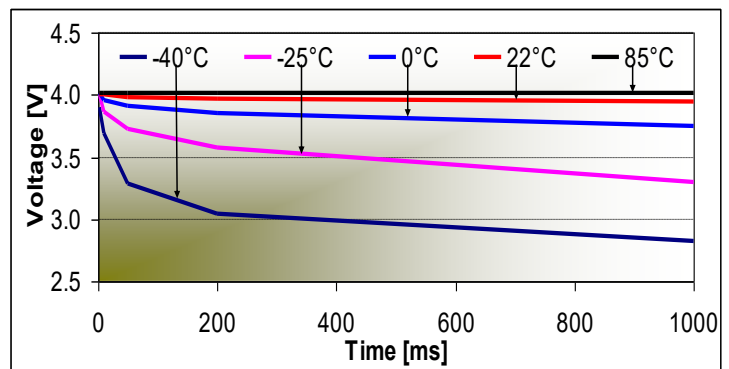
Pulse capability at Room Temperature



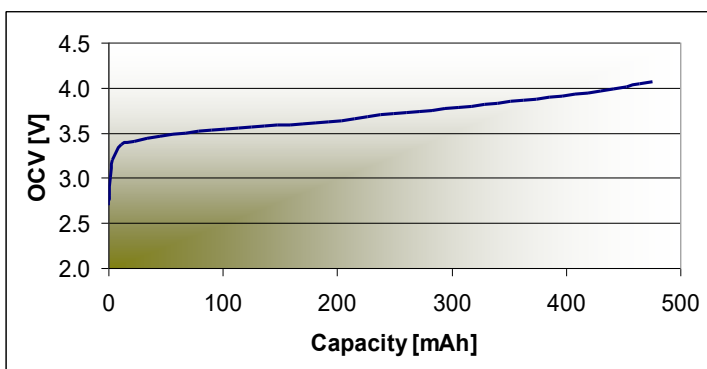
Discharge curves at 1 A



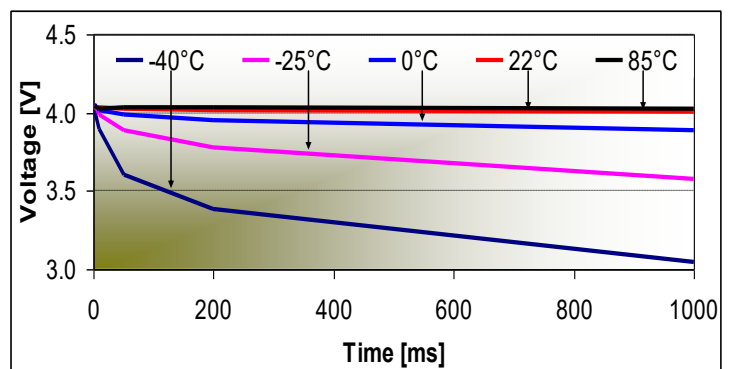
Pulse capability at 1 A



Capacity vs. OCV



Pulse capability at 0.5 A



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