### For high temperature utility

## **TLI-1550HT**



#### **AA Size Lithium Ion Rechargeable Battery**

Notice: Charging circuit and application load profile have to be approved by Tadiran prior to the use of this cell.

#### **Physical Characteristics**

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

#### Charge

Max, Charge Voltage 4.1 \

Charge Method CCCV (Constant Current/Constant Voltage)

Max Charge Current @ -20 to +50 °C 120 mA

Max Charge Current @ -40 to +85 °C 20 mA

Charge / Discharge operating temp. -40 to +135 °C

**Discharge** 

Max. Continuous Discharge Current 5.0 A @ 20 °C

End of Discharge 2.2 V @ RT. (discharge below 2.2 V at 20 °C

may increase the cell internal impedance)

#### **Performance**

Item	Value	Conditions
Maximum Capacity when charged to 4.1 V	500 mAh	Discharge at 20 mA to 2.2 V at 20 °C
Charge / Discharge Cycles	>1000	At Room Temperature
		(see attached chart)
Capacity Retention after 100 cycles (reversible)	93 %	Discharge at 100 mA at 20 °C
Capacity Retention after 5 years (reversible)	91 %	Discharge at 100 mA at 20 °C
Impedance (RT)	< 100 mΩ	Impedance at 1 KHz

#### Physical Cell / Battery Protection (to be applied by the user)

Item	Specification	
Over charge protection	Cell voltage should not be higher than 4.2 V	
Over discharge protection	Cell voltage should not be lower than 2.2 V	

#### Battery pack assembly and usage considerations

- For 2 cells or more in series, voltage shall be monitored on each cell.
- For more than 2 cells in parallel, maximum charge current shall be limited to 250 mA for the whole pack.

#### **Safety Considerations**

#### The cells successfully passed the following tests:

Shock & Vibration UN

Short Circuit at RT, +55 °C & +72 °C UN

UN Manual of Tests & Criteria

Heating at 170  $^{\circ}\text{C}$ 

**Impact** 

Over Charge UN
Forced Discharge UN
Crush UN

WARNING: Fire, Explosion, And Severe

Fire, Explosion, And Severe Burn Hazard. Do Not Crush, Disassemble, Heat Above 150°C, Incinerate Or Short Circuit.

www.tadiranbatteries.com

# TU



#### **Key Features**

- Hermetically sealed (glass-to-metal)
- Wide operating temperature range
- Low self discharge
- Large number of cycles
- High output current
- High reliability
- Safe design
- Lightweight

#### **Main Applications**

- Medical Autoclavable devices
- Heavy-duty vehicle engines
- Automotive utilities at high temp
- Oil drillers
- a a

#### Ordering P/N:

**TLI-1550HT/S** 61-1563-22000 **TLI-1550HT/T** 61-1563-22150

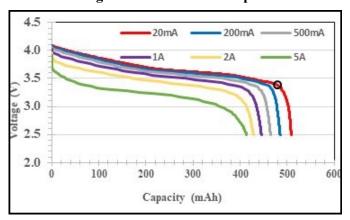
## For high temperature utility

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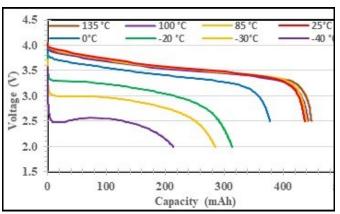


#### **Performance Data**

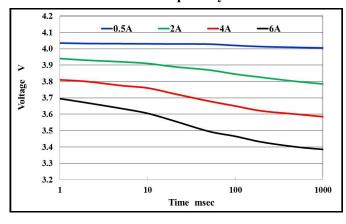
#### Discharge curves at Room Temperature



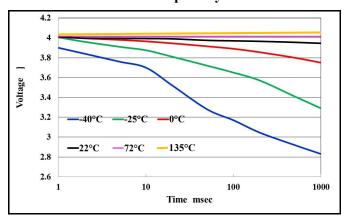
Discharge curves @ 1 A



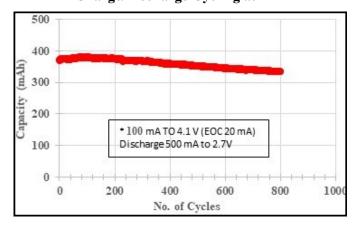
1 Sec. Pulse Capability at RT



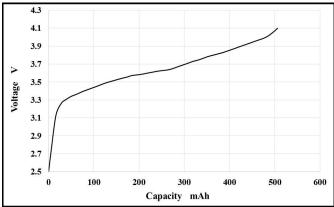
1 Sec. Pulse Capability at 1 A



Charge/Discharge Cycling at RT



**Open Circuit Voltage Vs. Capacity** 



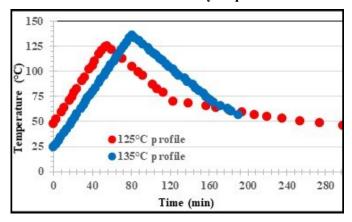
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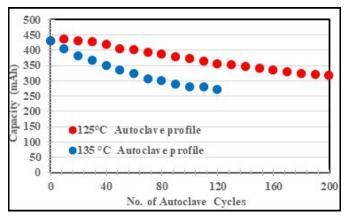


#### **Performance Data**

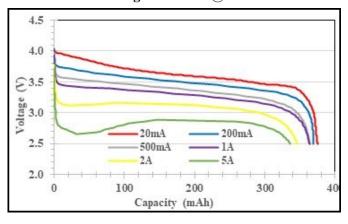
#### **Practical Aoutoclave cycle profiles**



Discharge @0.5A vs. Autoclave cycles



Discharge after 24h @ 135°C



Discharge at 1A after 24h@ various temperatures

