

# HLC – 1520A



## For *PulsesPlus™* batteries

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

Capacity when charge to 3.67 V	140 As
Capacity when charge to 3.90 V	210 As
Discharge end voltage	2.5 V (discharge below 2.5 V at RT may increase the HLC internal impedance). For other temperatures and discharge condition please contact Tadiran for these end voltage conditions.

### Mechanical characteristics

Length	20 mm. max
Diameter	15.1 mm. max
Weight	7.7 gr. max

### Operating conditions

Maximum discharge current:	
Continuous	0.5 A
Pulse, 1 sec	2.0 A
Charge (constant current)	
Max. charge voltage	3.95 V
Max. charge current	25 mA
Operating temperature range	
HLC in PulsesPlus™ battery	-40 °C ÷ +85 °C
Storage temperature range of HLC	-40 °C ÷ +60 °C
Cell impedance at RT	< 250 mΩ at 1 kHz
Self discharge of PulsesPlus™ battery at RT	1 µA
Self discharge of PulsesPlus™ battery at 80 °C	5 µA

Shelf life at different storage temperature to 80% of initial capacity

Temperature	HLC	HLC in PulsesPlus™ battery
RT	3 years	10 years
60 °C	4 weeks	7 years
80 °C	1 week	At least 1 year

### Safety

### Tested according to:

Short circuit at RT and at +55 °C	UL, UN, IEC
Oven at +150 °C	UL, IEC
Over-charge & over-discharge (200 % at currents up to 0.5 A)	UL, UN, IEC
Impact	UL, UN, IEC
Compression	UL, IEC
Shock and vibration	UL, IEC

UN Manual of Tests and Criteria, UL 1642, IEC 60086

UL Approved under file MH12193 issued December 7<sup>th</sup>, 2000



### Technology

- Anode: Carbon based
- Cathode: Multi metal oxides
- Electrolyte: Organic
- Shut down separator

### Key Features

- Hermetically sealed (glass-to-metal)
- Wide operating temperature range
- Low self discharge
- End of life indication capability
- High reliability
- Lightweight
- Safe design

### Main Applications

- Utility Meters (AMR)
- Asset, Container & Cargo Tracking
- RFID Devices
- Sonar Buoys
- Communication Equipment
- Emergency & Medical Devices

### Ordering Part No.

■ HLC-1520A/S	61152122000
■ HLC-1520A/T	61152122150
■ HLC-1520A/TP	61152132000
■ HLC-1520A/PT2	61152135000

### Tadiran Batteries Ltd.

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**WARNING:**  
Fire, Explosion, And Severe Burn Hazard.  
Do Not Recharge, Crush, Disassemble, Heat  
Above 100°C, Incinerate Or Short Circuit.

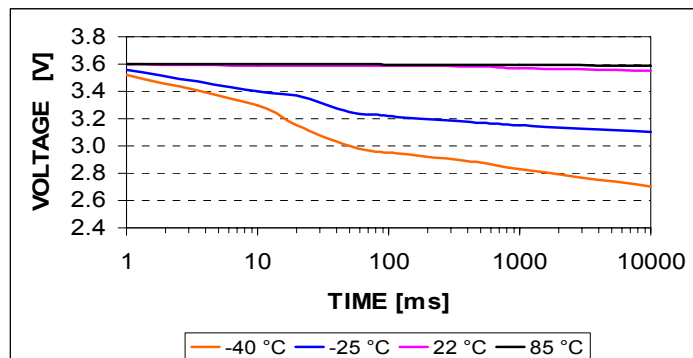
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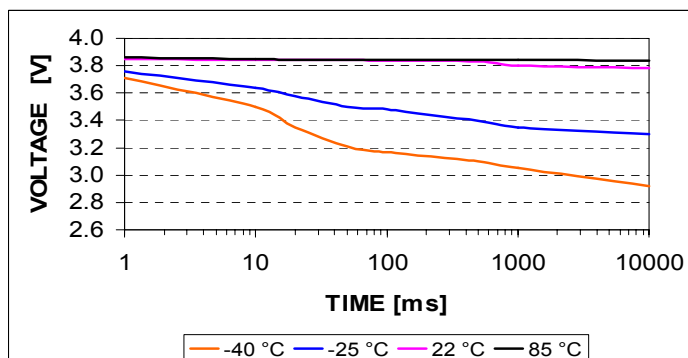


## Performance data

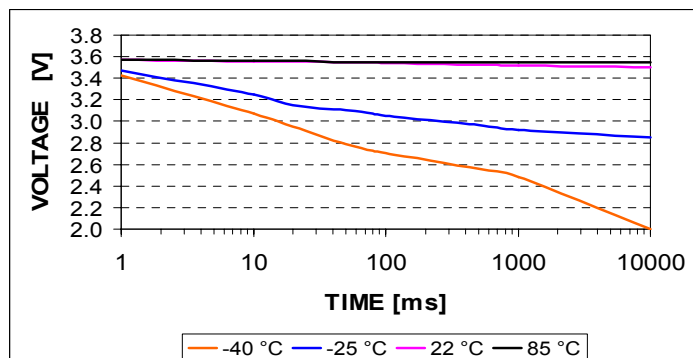
Voltage curves for HLC1520A at Li/SOCl<sub>2</sub> potential (3.67 V), 200 mA



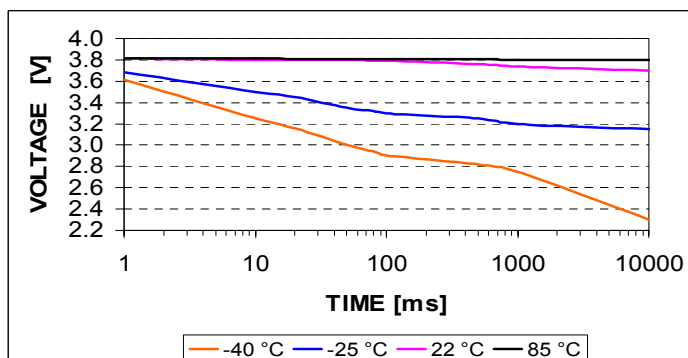
Voltage curves for HLC1520A at Li/SO<sub>2</sub>Cl<sub>2</sub> potential (3.90 V), 200 mA



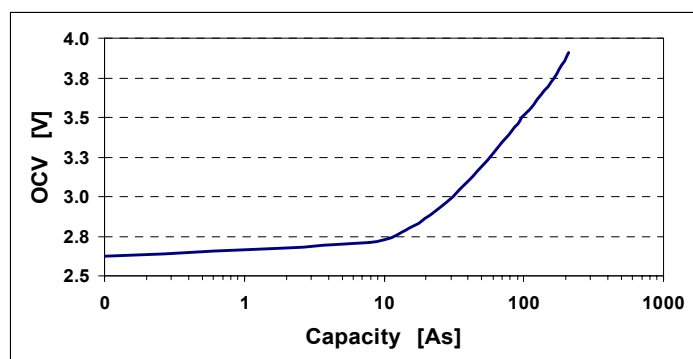
Voltage curves for HLC1520A at Li/SOCl<sub>2</sub> potential (3.67 V), 350 mA



Voltage curves for HLC1520A at Li/SO<sub>2</sub>Cl<sub>2</sub> potential (3.90 V), 350 mA



Available capacity vs. OCV for HLC1520A (at RT, 50 mA discharge)



### Warning:

- The HLC is designed for use in a PulsesPlus™ battery or in low charge current as specified only. The HLC may explode or violently vent if over-charge above 4.4V.
- Do not charge the HLC higher than 4.1 V, over discharge, short circuit, heat above 100 °C, incinerate or expose content to water.
- Charging the HLC at above 3.95 V may lead to capacity loss and / or internal impedance rise.

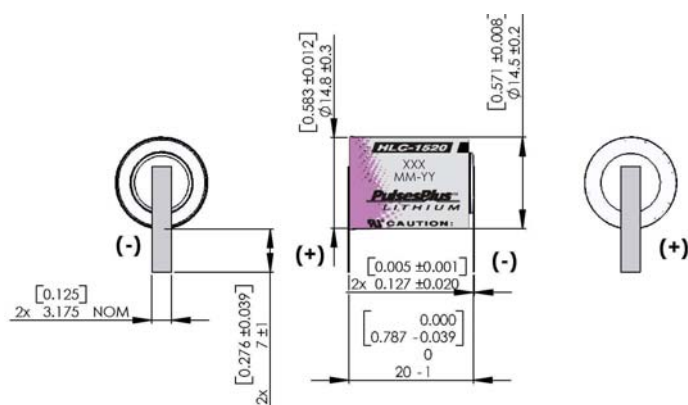
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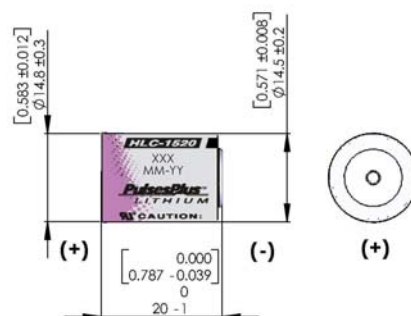


## Lead terminations

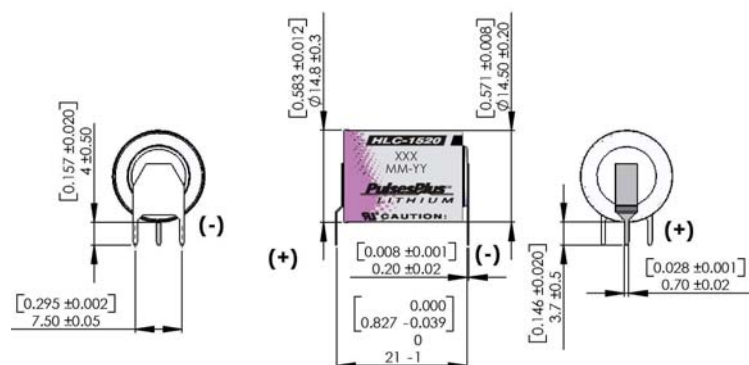
**HLC-1520A/T (Soldering Tabs)**  
Cat. # 61152122150



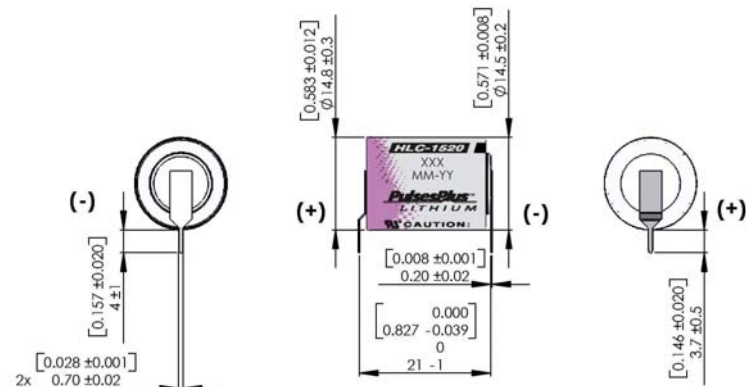
**HLC-1520A/S (Standard)**  
Cat. # 61152122000



**HLC-1520A/TP (PCB Mountable - Polarized)**  
Cat. # 61152132000



**HLC-1520A/PT2 (PCB Mountable)**  
Cat. # 61152135000



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