

# Ultra Safe Energy, Enhanced for Maximum Durability in Extreme Conditions



## HL14500S

### Extreme Temperature Range

## $-40^{\circ}\text{C}$ to $85^{\circ}\text{C}$

Operates from  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$  with stable output, perfect for harsh environments.

### Low-Temperature Performance

Delivers 3.2V/6W at  $-20^{\circ}\text{C}$ , even after high-temperature storage.

### High-Temperature Stability

Retains over 90% capacity and 3.80V OCV after 48 days at  $80^{\circ}\text{C}$  for reliable performance.

Retain 70% capacity after 1C/2C 800cycles at  $60^{\circ}\text{C}$

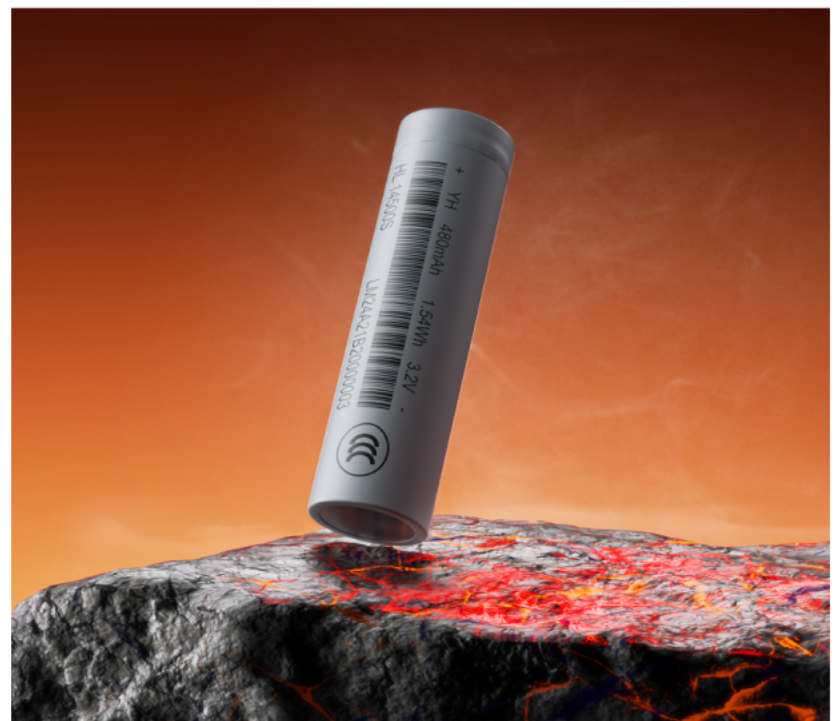
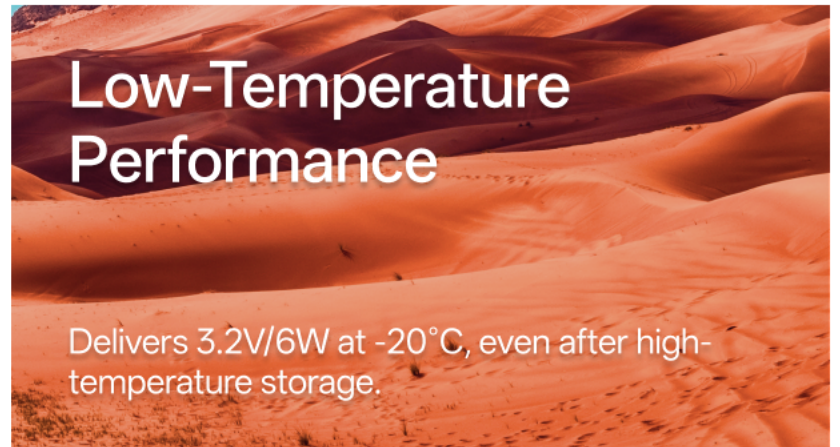
## 70%

Retains over 80% capacity after 1000 cycles, ensuring long-term reliability.

## 1000 Cycles

Supports 8C continuous discharge, meeting high-power application needs.

## 8<sub>c</sub>



# Product Specifications

HL14500S



## Dimension

Diameter ..... 14.2±0.2mm      Height ..... 48.9 ± 0.3 mm

## Capacity

Min capacity (0.2C) ..... 480 mAh      Typical capacity (0.2C) ..... 500 mAh

## Voltage and current

Nominal voltage ..... 3.20V      Working voltage ..... 2.00V-3.65V

Max charge / ..... 0.48A / 2.40A  
discharge current

## Working temperature

Charge ..... -20~60°C      Discharge ..... -40~85°C

## Other

Cycle life ..... > 1000      -40°C capacity (0.2C) ..... ≈ 60%

Recovery capacity ..... > 70%  
after 30 days 80°C aging

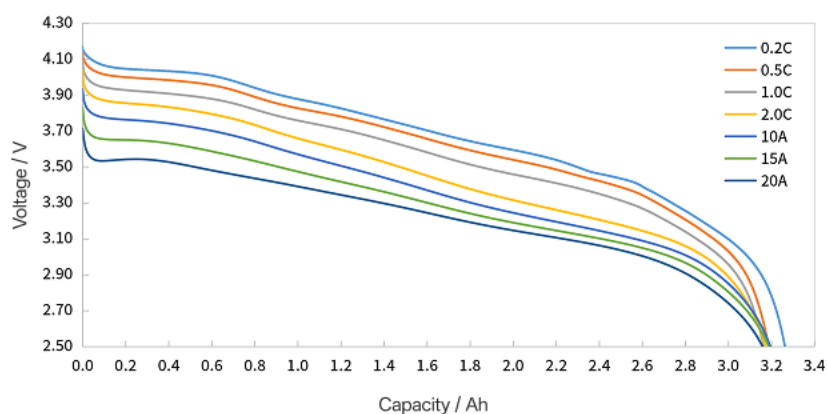


# Explore HL14500S Performance Insights

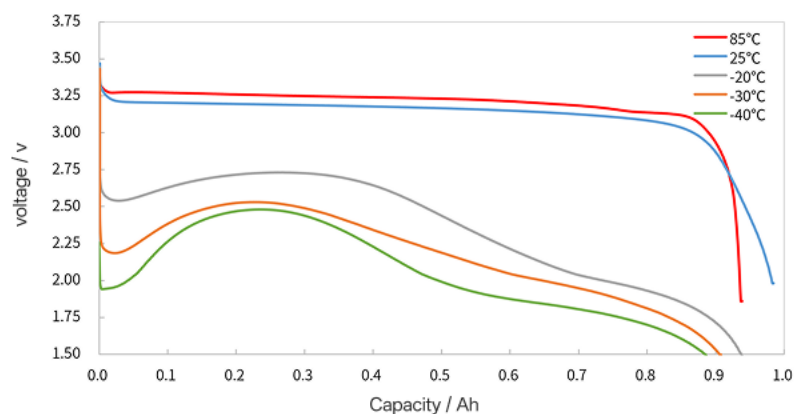
Defy Temperature Limits:  
Consistent Power Anywhere.



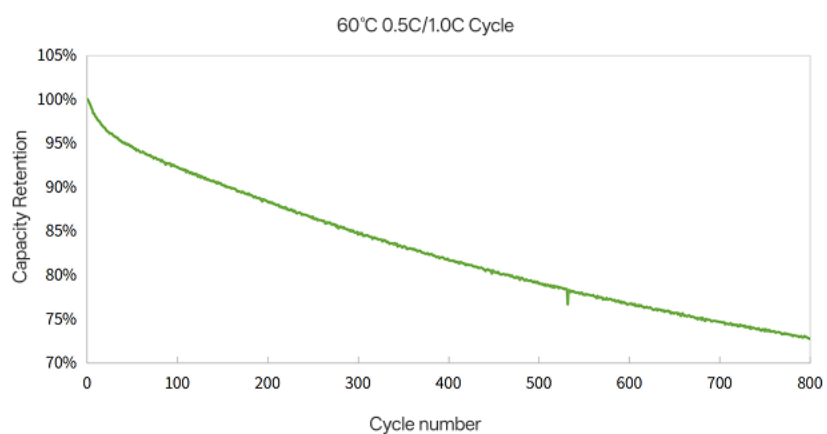
## Rate discharge



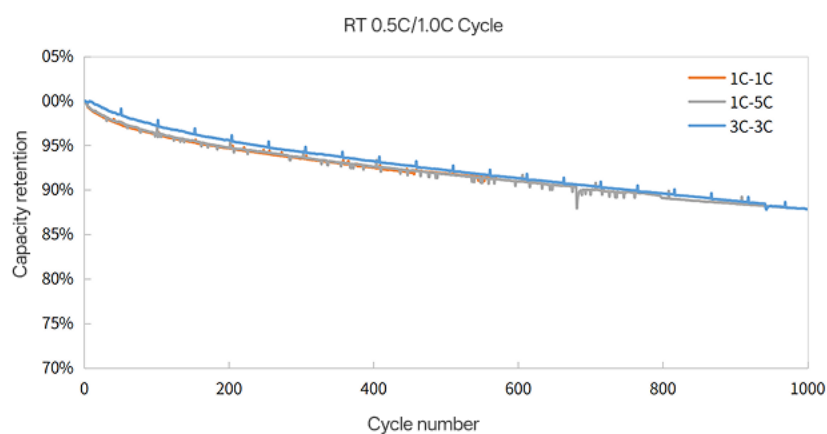
## Discharge at different temperature



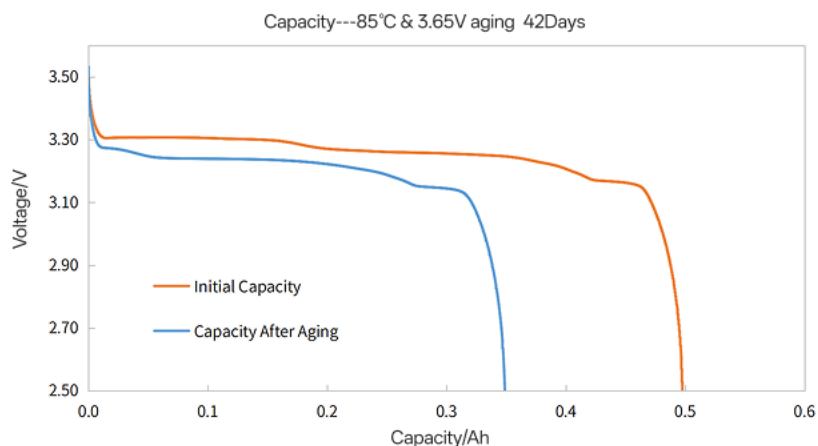
## Cycle at high temperature



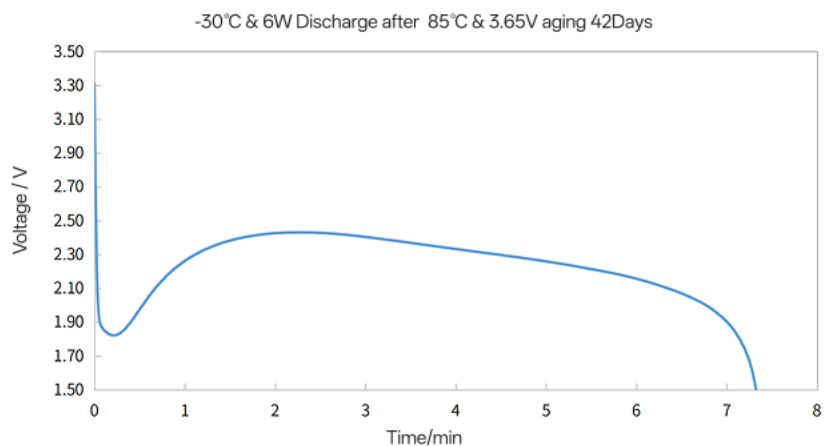
## Cycle at room temperature



## 85°C&3.65V aging



## 85°C&3.65V aging



# What we're enabling with HL14500S



## Reliable Power for Automotive T-Box

Automotive T-box systems require stable power in extreme temperatures with uncompromised safety. The HL14500S battery delivers reliable connectivity, efficient performance, and advanced protection features to ensure secure operation even in the harshest conditions.

## Optimized Power for GPS Tracking

Logistics GPS trackers require stable power for precise tracking in harsh environments. The HL14500S battery supports continuous operation to optimize fleet management, delivery efficiency and safety.



## A Superior Alternative to NiMH Batteries

The HL14500S is an ideal upgrade from traditional NiMH batteries, offering higher energy density, superior safety, excellent durability in extreme temperatures, and minimal self-discharge. It's a smarter, more reliable power solution for demanding applications.



Security &  
Monitoring



Medical  
Devices



Industrial  
Handhelds



Outdoor  
Instruments



Mineral  
Exploration



Military  
Gear



Smart Logistics  
Equipment



# UltraXel Limited

UltraXel specializes in wide-temperature lithium-ion cells, provides innovative energy solutions for extreme environments to enhance product performance while powering diverse applications.



# 26

Years  
Battery Expertise

# 50+

Countries  
Global Reach

# 38

Invention Patents

# 6 Lines

Of Automated Production

# 100+

International Trusted Partnerships

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