

The background of the slide is a dark blue, almost black, field filled with a complex, glowing network of interconnected hexagonal and pentagonal rings. These rings form a mesh-like structure that resembles a carbon nanotube or a molecular lattice. The lines of the mesh are a bright, ethereal blue, with some points appearing slightly more intense, giving the impression of energy or light flowing through the structure. The overall effect is a high-tech, futuristic aesthetic.

Carbon Nanotube Batteries LTC Series

Building a Long-Life Energy Core for Lightweight Electric Vehicles

LEOCH BATTERY

Your Global Battery Partner

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Industry Pain Points & Market Opportunities

User Core Demands



Long Lifespan

Extended service life-no replacement every 1-2 years



Low-Temp Performance

Stable in cold weather- not <50%capacity at -20°C



High Safety

Reliable protection-zero leakage or explosion risk

Market Opportunities



Accessibility

Growing need for reliable light EVs in urban commuting and shared mobility



Oil energy crisis

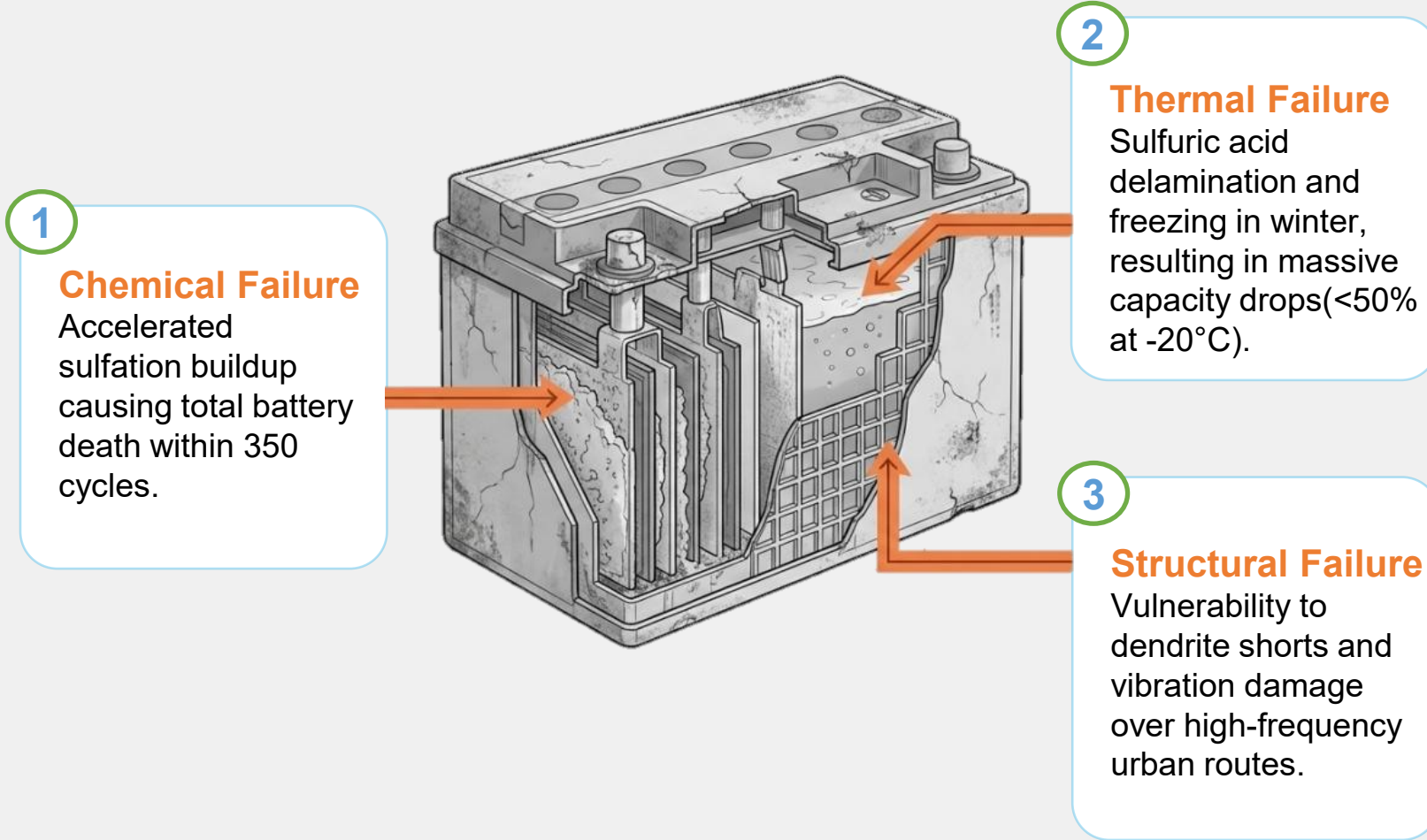
Rising fuel costs accelerate EV adoption across last-mile and personal transport



Population aging issue

Surge in powered wheelchair and e-tricycle demand from elderly and mobility-impaired users

The Physical Breaking Point of Traditional Lead-Acid



Product Positioning & Technological Breakthrough

A high-performance motive power battery specially designed for light-duty electric vehicles with high-frequency use and high reliability requirements.



Carbon nanotube technology

Builds a 3D conductive network to enhance conductivity and delay sulfation.



New alloy grid

Corrosion resistance, vibration resistance, and extended service life.



Nano silicon electrolyte

Prevent sulfuric acid delamination and improves plate service life.



3D composite separator

Anti dendritic short circuit-explosion-proof and leak-proof by design.

Longer Life · Higher Efficiency · Enhanced Safety—three pillars engineered into every cell

Core Advantage ①: Ultra-Long Cycle Life

80% DOD Cycle Life Comparison



Technical Support

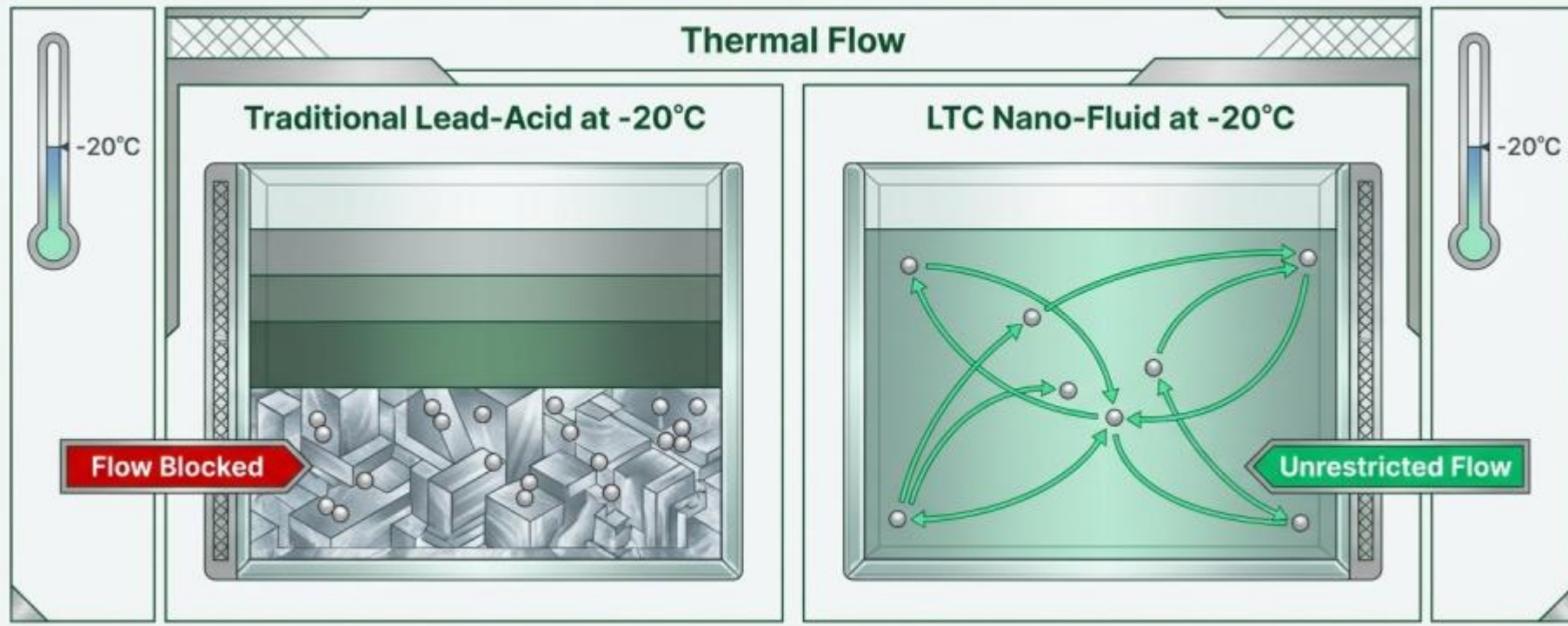
- Modified carbon nanotubes construct a 3D conductive network, dramatically delaying sulfation - the primary cause of lead-acid battery failure.
- LTC12-26 achieves **nearly 600 cycles at 100% DOD**, and **over 1,000 cycles at 80% DOD**.

Customer Value

- ✓ **2-3 Years**
- ✓ No battery replacement needed, significantly reducing maintenance costs.
- ✓ **Higher ROI**
Greater efficiency and income for delivery riders with high-frequency use.

A 42% increase above the industry benchmark

The Thermal Shield: Nano Silicon Electrolyte



The nanoscale silicon electrolyte physically prevents low-temperature stratification maintaining high ionic conductivity even when traditional batteries freeze.

Core Advantage ② : Excellent Low-Temperature Performance



Extreme Low-Temperature Performance

≥75% Capacity Retention @ -20°C

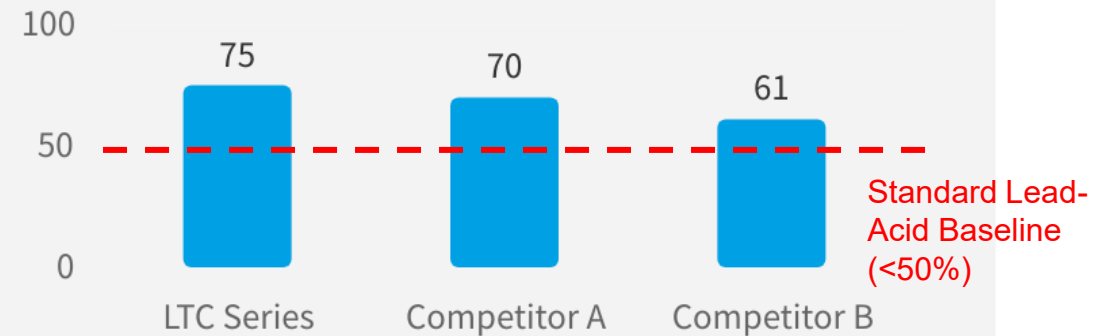


Nanoscale Silicon Electrolyte

Prevents low-temperature stratification and maintains high ionic conductivity, exceeding the national standard of 70%—delivering ≥75% capacity even at -20°C, versus <50% for conventional lead-acid batteries.



Performance Comparison



All-Season Riders

Winter capacity guaranteed—worry free riding in any climate.



Elderly Safety

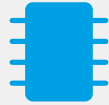
Reliable cold-weather performance for powered wheelchair users

Core Advantage ③ : Safe & Reliable for All Road Conditions



Multi-Layer Protection

- Anti-short circuit & Leakage-proof
- Explosion-proof design
- Corrosion & Vibration resistant



Advanced Technology

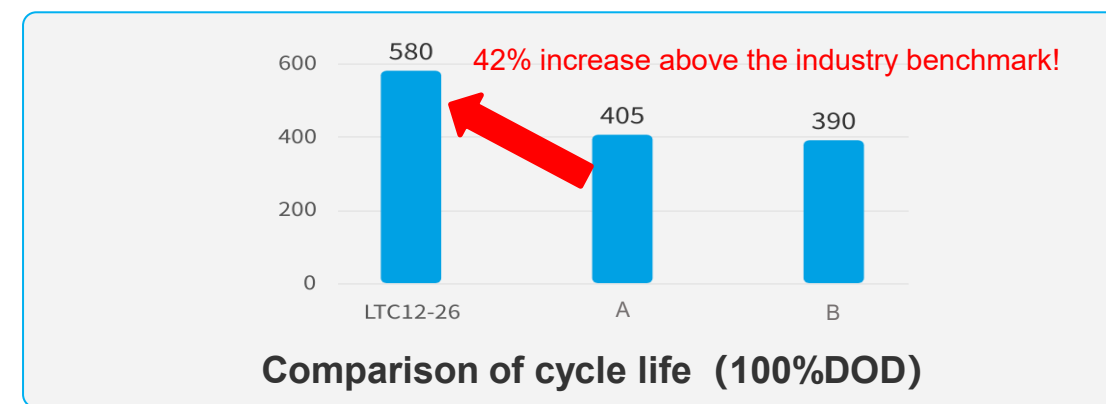
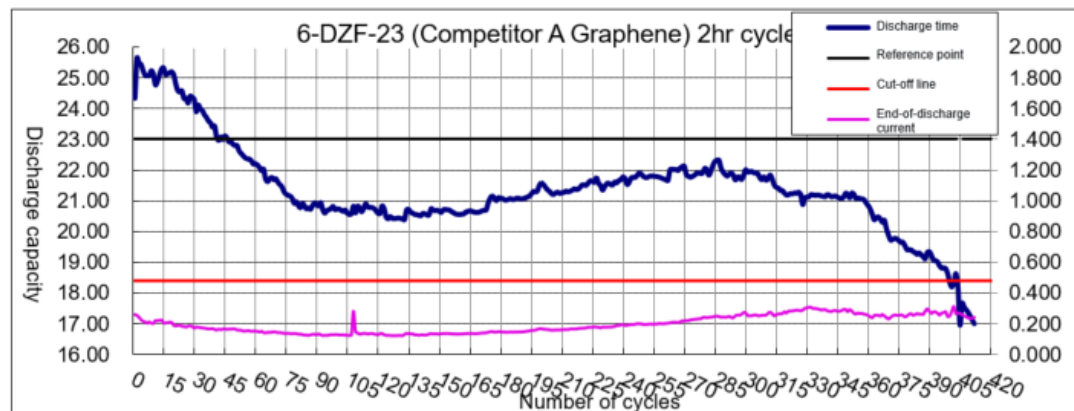
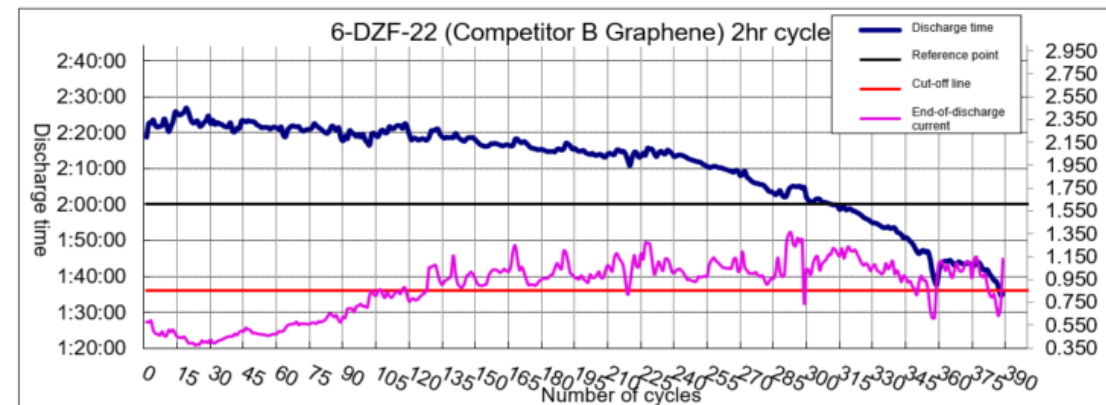
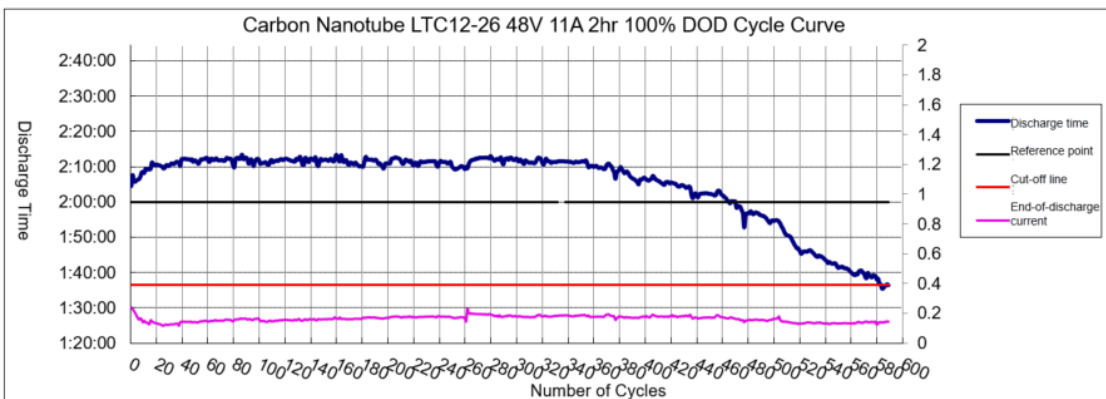
- 3D Composite Separator
- New Alloy Grid
- Full-structure sealing



Trusted Value

- Zero fire/explosion risk
- Peace of mind for daily users
- Suitable for electric wheelchairs

Test Data Comparison



Core Test Conclusion

- The testing environment: real vehicle usage scenarios, using 100% DOD standards.
- The LTC series batteries have **the longest cycle life**, most stable capacity retention curve, and long-term cost-effectiveness.

Patent & Technological Barriers

Patent No.: ZL202111122433.0



Patent name: A trace amino modified carbon nanotube negative electrode plate, lead paste and its preparation method.



Core technology: Amino modified carbon nanotubes are used to construct a 3D conductive network, promoting the reduction of PbSO_4 and delaying battery failure.



Authorization date: November 29, 2022 (patent term of 20 years).



Technical value and barriers

- **Technical Exclusivity:**

20-year patent protection locks in long-term competitive advantage

- **Core Technology**

Amino-modified CNTs build a 3D conductive network, reducing PbSO_4 and delaying battery failure

- **Competitive Barriers:**

High technological barriers prevent short-term replication by competitors

Application Scenarios & Customer Value

CORE APPLICATION SCENARIOS



E-Scooter/Bike/Tricycle

Scenario: Takeout business/Commuting/Shared Travel
Requirement: Long lifespan + fast charging technology



Electric Equipment

Scenario: Commercial cleaning / Public area sanitation
Requirement: Stable power + Long endurance capability



Electric Wheelchair

Scenario: Elderly/Disabled travel assistance
Requirement: High safety + low temperature resistance



Warehouse Vehicle(small)

Scenario: Warehouse logistics/Factory material handling
Requirement: High load + Low energy consumption

KEY CUSTOMER VALUE



Reduce TCO

Reduce battery replacement frequency and significantly save long-term usage costs



Improve Efficiency

Supports fast charging and low-temperature stable operation, with no usage restrictions around the clock



Ensure Safety

Equipped with multiple protections against leakage, explosion, and short circuit, ensuring peace of mind throughout the entire process



Longer Warranty

Industry-leading after-sales commitment for worry-free ownership

Product Parameters ①: LTC Series Core Parameters

Model	Volt(V)	C20(Ah)	C5(Ah)	Size(L×W×H)	TH(mm)	Term	Weight(kg)
LTC12-26	12	26	24	181×76.5×171	171	T15	6.90
LTC12-40	12	40	36	267.5×77.5×171	171	T15	10.2
LTC12-54	12	54	48	223×123×175	175	T12-A	13.6
LTC12-60	12	60	57	224×135.5×177.5	177.5	T12-A	15.3
LTC12-70	12	70	61	224×150×177	177	T12-A	16.9

Product Parameters ①: LTC Series Core Parameters



**POWER YOUR
WORLD FORWARD**





LEOCH LTC Series | Patented Tech · Long Life · Deep Cycle · Higher Safety



**PATENTED
CARBON NANOTUBE
MOTIVE POWER BATTERY**

2.5x
the Lifespan

1000
Cycles @80% DoD

**PATENTED
TECHNOLOGY**

**HIGHER
SAFETY**

Fortified Core Architecture:
Maximizes discharge capacity

Advanced Nanotube Integration:
Actively prevents sulfation

3D Composite Separator:
Ensures ultimate safety and reliability

Nano-Silicone Electrolyte:
Extends total cycle life

Lithium-like cycling performance
with proven lead-acid safety

Environmental Adaptability:
75%+ capacity at -20°C

LEOCH LTC Series | Patented Tech · Long Life · Deep Cycle · Higher Safety



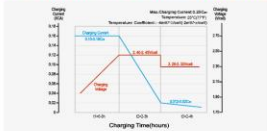
APPLICATION



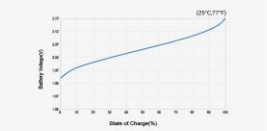
SPECIFICATIONS

Model	Voltage (V)	Rated Capacity C20(Ah)	Dimensions				Weight (kg)	Terminal
			L(mm)	W(mm)	H(mm)	TH(mm)		
LTC12-26	12	26	181	76.5	171	171	6.9	T15
LTC12-40	12	40	267.5	77.5	171	171	10.2	T15
LTC12-54	12	54	223	123	175	175	13.6	T12-A
LTC12-60	12	60	224	135.5	177.5	177.5	15.3	T12-A
LTC12-70	12	70	224	150	177	177	16.9	T12-A

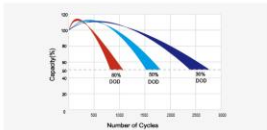
PERFORMANCE CHARACTERISTICS



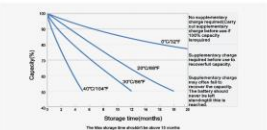
Charging Profile



Relationship of OCV and State of Charge



Cycle Life in Relation to Depth of Discharge



Self-discharge Characteristic

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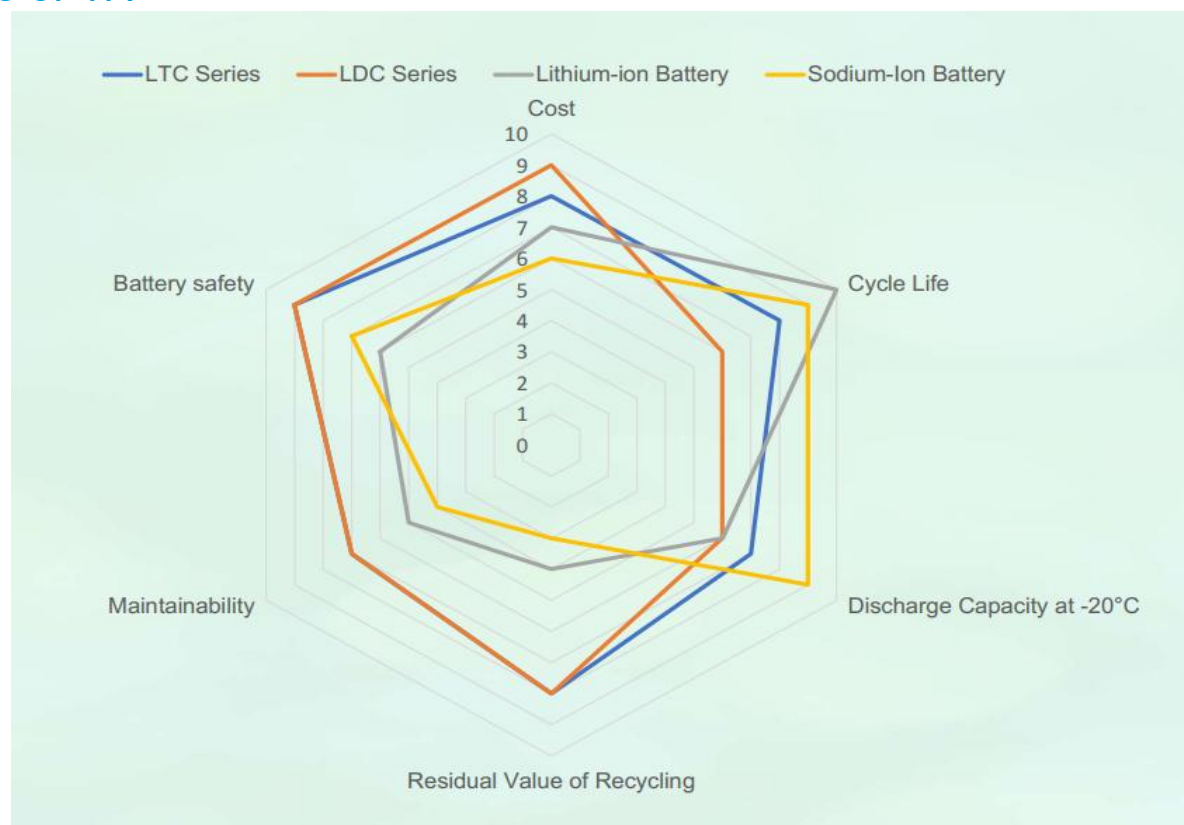
Product Parameters ②: LTC & A/B/C Performance Comparison

Comparison of key characteristics (10-point)

Battery Series	LTC Series	LDC Series	LP Series	LPC Series	Lithium-ion Battery	Sodium-ion Battery
Cost	8	9	9	9	7	6
Cycle Life	8	6	4	4	10	9
Discharge Capacity at -20°C	7	6	5	5	6	9
Residual Value of Recycling	8	8	8	8	4	3
Maintainability	7	7	7	7	5	4
Battery safety	9	9	9	9	6	7
total score	47	45	42	42	38	38

Product Parameters ②: LTC & A/B/C Performance Comparison

A 10-point comparison across four battery series on the dimensions that matter most to end users and operators. Tcleads the field with a total score of 47.



 LTC Series total score: 47/60- highest overall, balancing cycle life, safety, cost, and cold-weather capability, Key differentiators: 1.000 cycles @ 80% DOD and $\geq 75\%$ capacity retention at -20°C .

LTC Series: The Long Life Energy Core of Light Electric Vehicles



1000 ultra long cycles

Far exceeding industry standards,
durable and long-lasting



75% capacity @-20°C

Fearless of severe cold, the power
remains strong



Comprehensive security protection

Multiple protections, worry free travel



Maximum 2-year warranty

Quality commitment, after-sales
guarantee



New series, optimal solution

Correct product, correct selection

Thanks for Watching!

LEOCH BATTERY