

20Ah & 46Ah High Temperature LFP Pouch Battery Cell

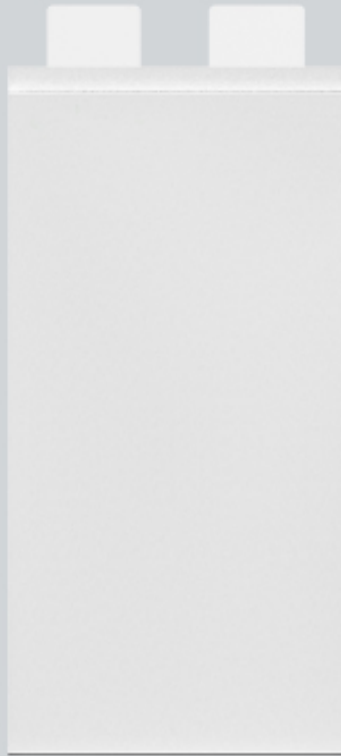
Key Specifications

Capacity	20Ah	Voltage	3.7V
Model	PC20F-T & PA46F-C	Operating Temp	-43°C~55°C

Product Overview

For fleet operators and OEM in hot climate regions, thermal degradation is the primary cause of premature power battery failure. Conventional lithium batteries suffer severe capacity loss and safety risks under extreme heat. LiTrue solves this critical industry bottleneck with our High Temperature Long Cycle Life LFP Pouch Battery Cell Series.

By leveraging advanced heat-resistant material systems and optimized electrolyte-electrode structures, these cells deliver thermal stability and durability that clearly outperform standard solutions—drastically improving reliability and cost efficiency for vehicles operating under the blazing sun or intensive heavy usage.



Engineered to Thrive at 45°C and Beyond

Available in 20Ah (Model PC20F-T) and 46Ah (Model PA46F-C) capacities, this series sets a new benchmark for heat resilience. Rather than testing our batteries at standard room temperature, we validate these cells in rigorous high-heat conditions. They are proven to achieve an astounding ≥ 2000 to 2500 cycles at a sustained 45°C.

Key Features & Engineering Advantages

- **Exceptional High-Temperature Lifespan:** Delivers 2000–2500 cycles at 45°C, ensuring your fleet remains operational for years without expensive battery replacements.
- **Ultra-Wide Operating Temperature:** The PA46F-C model can safely operate in ambient temperatures up to 65°C, while the PC20F-T model provides incredible cold resilience down to -43°C.
- **Strong Pulse Performance:** Don't let the heat slow you down. The PC20F-T model supports massive pulse discharges up to 7C, providing the instant torque required for high-speed electric motorcycles and emergency vehicles.
- **Balanced Energy Density:** Achieving 152–157 Wh/kg, offering the perfect equilibrium between vehicle range, extreme safety, and thermal stability.
- **Advanced Stacked Pouch Structure:** Designed for low internal resistance and highly efficient heat dissipation, making thermal management and system-level integration seamless.

Technical Specifications (PC20F-T & PA46F-C Models)

Compare the detailed specifications of our high-temperature LFP pouch cells. Our engineering team provides full system-level customization, tailoring modules and BMS solutions to your specific vehicle platforms.

Specification	Model: PC20F-T	Model: PA46F-C
Nominal Capacity	20 Ah	46 Ah
Energy Density	152 Wh/kg	157 Wh/kg
Max. Continuous Charge Rate	2C	2C
Max. Continuous Discharge Rate	3C	3C
Max. Pulse Charge Rate	4C	3C
Max. Pulse Discharge Rate	7C	4C
Operating Temperature	-43°C ~ +55°C	-30°C ~ +65°C
Cycle Life (@45°C)	≥ 2000 cycles (1C/3C)	≥ 2500 cycles (1C/1C)
Dimensions (T×W×H, mm)	12.6 × 90 × 192	12.5 × 161 × 232



Ideal Applications for Hot Climate Operations

This high-temperature LFP series is the ultimate power solution for OEMs exporting to the Middle East, Southeast Asia, Africa, and other hot-weather regions. It is specifically designed for:

- Special Purpose Vehicles: Inspection carts, construction machinery, emergency response, and defense-related vehicles requiring fail-safe reliability.
- High-Speed Electric Motorcycles: Providing continuous high-rate discharge without thermal

throttling.

- Performance Two-Wheelers & Three-Wheelers: Heavy-duty delivery trikes working long hours in summer heat.
- Stationary & Mobility Power Systems: Any application where exceptional thermal durability and safety are non-negotiable.

Why Choose LiTrue for Thermal Management?

As a leading innovator in LFP cell manufacturing, LiTrue possesses deep expertise in high-temperature life optimization. We engineer our materials and cell structures specifically to minimize thermal aging. Our mature stacked pouch manufacturing process ensures that every cell delivers long-term consistency.

We don't just sell cells; we offer system-level solutions. Leveraging our extensive experience with electric motorcycles and special vehicles, we provide integrated battery cells, custom modules, intelligent BMS, and complete thermal management designs. With stable mass production capabilities, we guarantee long-term supply to support the full lifecycle of your vehicle platforms.

[Request High-Temperature Cell Samples & Test Reports](#)