30Ah & 33Ah Low Temperature LFP Pouch Battery Cell

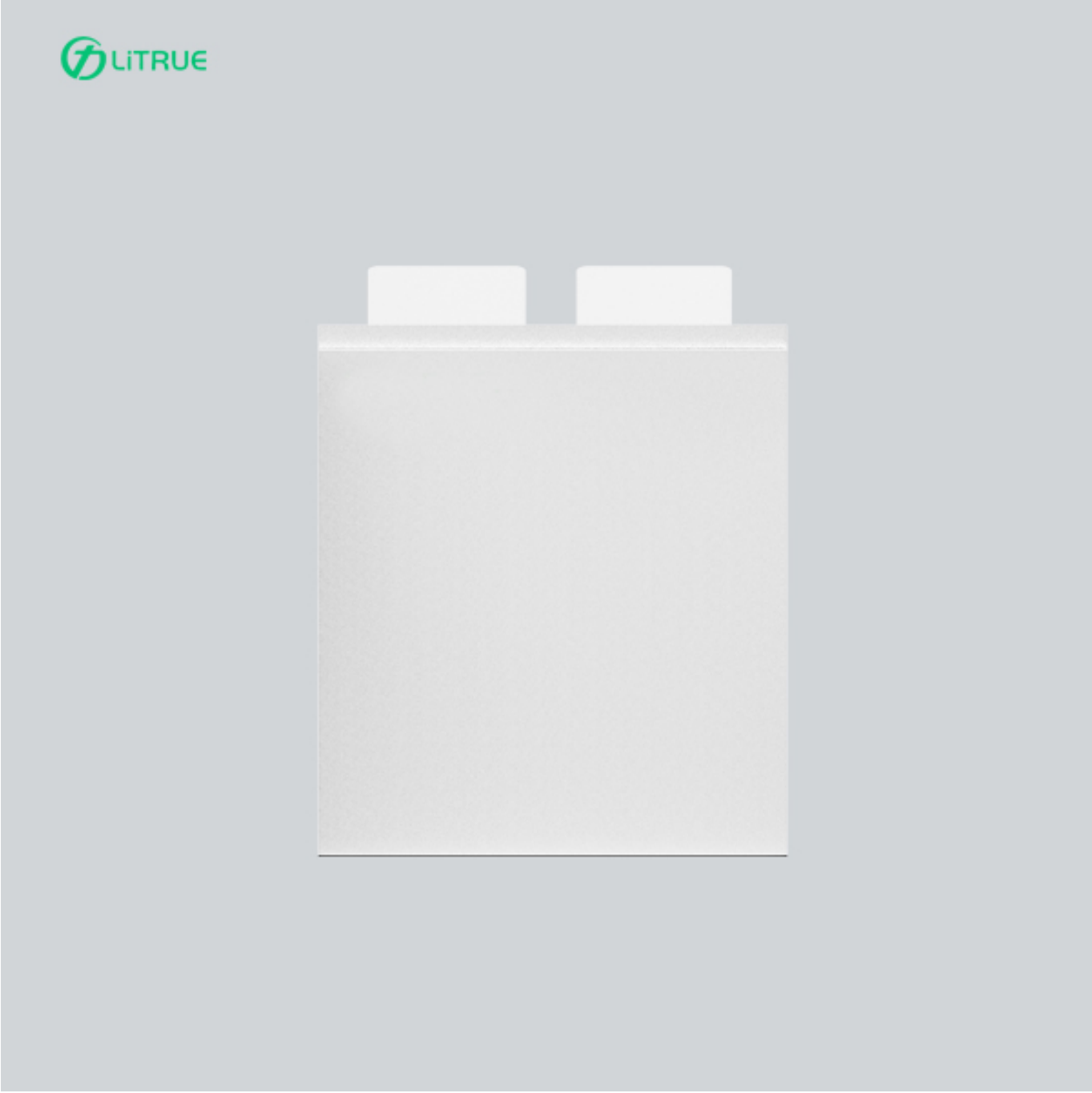
Key Specifications

Capacity	30Ah	Voltage	3.6V
Model	PM30F-L & PP33F-L	Operating Temp	-43℃~55℃

Product Overview

Operating electric vehicles and industrial machinery in sub-zero climates presents a massive engineering hurdle: conventional lithium batteries suffer from severe internal resistance growth, sluggish charging, and drastic capacity loss in the cold. LiTrue engineered the Low Temperature LFP Pouch Battery Cell Series specifically to conquer these freezing environments.

By utilizing a proprietary low-temperature electrolyte system and highly optimized electrode material formulations, our cells effectively suppress internal resistance growth. This significantly improves both charge/discharge capability and overall energy utilization efficiency in extremely cold conditions, ensuring your equipment never stalls in the snow.



Engineered for Extreme Cold: Reliable Power Down to -43°C

Available in 30Ah (Model PM30F-L) and 33Ah (Model PP33F-L) capacities, this series is validated to operate flawlessly across a staggering temperature range of -43°C to 55°C. Even in the depths of winter, these cells maintain stable rate capabilities and robust cycle performance, all while preserving the inherent, world-class safety of Lithium Iron Phosphate (LFP) chemistry.

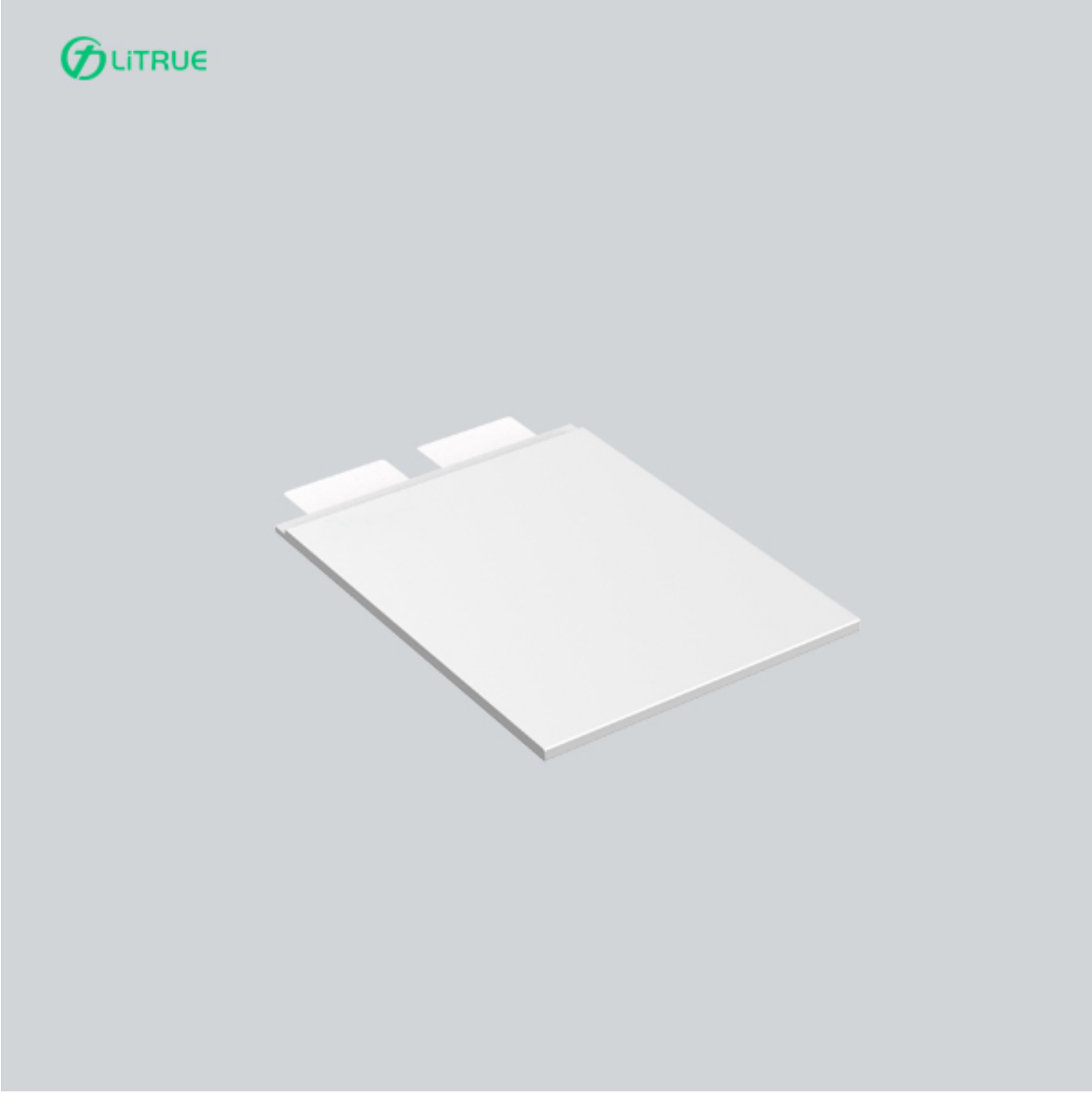
Key Features & Engineering Advantages

- Exceptional Low-Temperature Performance: Delivers stable, continuous charge and discharge capabilities even when ambient temperatures plummet to -43°C.
- Advanced Low-Temperature Electrolyte: A customized chemical system designed specifically to facilitate rapid ion transfer and improve energy output in freezing conditions.
- Strong Pulse Capability for Cold Starts: Cold weather demands massive startup torque. The PM30F-L model supports extreme pulse discharges up to 10C, easily handling transient heavy loads and frozen engine starts.
- Stable Rate Output: Supports 1C to 3C continuous charge and discharge, ensuring reliable power delivery without voltage sag.
- Rugged Cycle Life: Achieves ≥1200 to 1500 cycles (1C/1C), providing long-term durability for vehicles operating in harsh, highly variable climates.
- Efficient Stacked Pouch Structure: Features low internal resistance, lightweight construction, and rapid heat dissipation, making system integration highly efficient.

Technical Specifications (PM30F-L & PP33F-L Models)

Compare the detailed specifications of our cold-weather optimized LFP pouch cells below. Our engineering team also provides fully customized dimensions, rate performance tuning, and system-level solutions tailored to your specific vehicle platforms.

Specification	Model: PM30F-L	Model: PP33F-L
Nominal Capacity	30.0 Ah	33.0 Ah
Energy Density	155 Wh/kg	158 Wh/kg
Max. Continuous Charge Rate	3C	1C
Max. Continuous Discharge Rate	3C	3C
Max. Pulse Charge Rate	5C	3C
Max. Pulse Discharge Rate	10C	6C
Operating Temperature	-43℃ ~ +55℃	-43℃ ~ +55℃
Cycle Life (1C/1C)	≥ 1200 cycles	≥ 1500 cycles
Dimensions (T×W×H, mm)	8.8 × 182 × 195	10.2 × 142 × 231



Ideal Applications for Cold-Region Operations

This series is the ultimate energy solution for specialized electric platforms operating in cold regions (such as Northern Europe, Russia, Canada, and high-altitude areas):

- Cold-Region Specialized Vehicles: Winter inspection fleets, border security patrol vehicles, and emergency response trucks.
- Winter Agricultural Machinery: Tractors and farming equipment operating in low-temperature

regions.

- Cold-Climate Engineering Vehicles: Snowplows, cold-storage forklifts, and outdoor construction equipment.
- Industrial Mobile Equipment: Autonomous Ground Vehicles (AGVs) and outdoor electric platforms exposed to massive temperature variations.

Partner with Cold-Weather Battery Experts

When operating in extreme environments, you cannot rely on standard battery assemblers. LiTrue brings deep expertise in low-temperature cell technology, utilizing proven cold-optimized material systems and rigorous stacked pouch manufacturing processes to guarantee absolute consistency and safety.

We implement full-process quality control, subjecting every batch to intense low-temperature performance and life testing. Beyond supplying bare cells, we offer system-level customization—integrating cells, modules, specialized cold-weather BMS, and structural thermal designs to ensure your vehicles perform perfectly in the snow.

Request Low-Temperature Cell Samples & Technical Data