

GRLFP-48V 200Ah Lithium Battery Technical Specifications and Market Analysis

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Core Parameters of 48V 200Ah Lithium Solutions

Industrial-grade lithium batteries in the 48V 200Ah configuration typically feature LiFePO₄ chemistry with energy densities reaching 140-160Wh/kg. The referenced models show discharge rates between 0.5C to 1C continuous, suitable for telecom infrastructure and medium-scale energy storage applications.

Performance Benchmarks

Cycle life: 3,500-5,000 cycles at 80% DoD

Operating range: -20° to 60° with integrated BMS

Modular design for parallel capacity expansion

Current Market Pricing Trends

Recent quotations (Q1 2025) indicate ¥8,500-¥9,200 per unit for tier-1 Chinese manufacturers. The price differential accounts for:

Cell quality (Grade A vs. Grade B)

Certification compliance (UN38.3, UL1973)

IP protection ratings (IP54-IP67)

Supplier Landscape

Major vendors like Narada Power and Joysun New Energy dominate the telecom backup sector, while specialized manufacturers like JC Solar&Energy cater to AGV and robotic applications. Minimum order quantities typically start at 2 units for commercial purchases.

Technical Differentiation Factors

Leading models incorporate active balancing technology and CAN/RS485 communication protocols. The emerging cell-level fusing technology enhances safety parameters, reducing thermal runaway risks by 62% compared to 2023 benchmarks.

Certification Requirements

Mandatory: CCC, CE, RoHS

Industry-specific: IEC62619 (energy storage systems)

Optional: UL9540A for North American markets

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Application-Specific Configurations

Telecom installations prioritize 19" rack-mountable designs with hot-swappable modules, while mobile applications require vibration-resistant construction (up to 5Grms). Recent project data shows 48V systems achieving 92.7% round-trip efficiency in solar microgrid deployments.

Prospective buyers should verify cycle life test reports and request third-party verification of actual capacity under load. Technical support for system integration remains a key differentiator among suppliers in this segment.

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