Battery Chemistry Quick Reference

Essential Specifications and Comparison Charts

EngineeringGrid Reference Sheet | 8 Pages | 1.2 MB

Lithium-Ion Chemistry Comparison

LFP - Lithium Iron Phosphate

Energy Density: 90-120 Wh/kg
Cycle Life: 2,000-5,000 cycles
Operating Temperature: -20´℃ to 60´℃
Safety Rating: Excellent
Cost: Low to Medium
Applications: Commercial vehicles, energy storage

NMC - Nickel Manganese Cobalt

Energy Density: 150-220 Wh/kg
Cycle Life: 1,000-2,000 cycles
Operating Temperature: -10´℃ to 55´℃
Safety Rating: Good
Cost: Medium to High
Applications: Premium EVs, performance vehicles

NCA - Nickel Cobalt Aluminum

Energy Density: 200-260 Wh/kg
Cycle Life: 500-1,000 cycles
Operating Temperature: 0´℃ to 45´℃
Safety Rating: Moderate
Cost: High
Applications: High-performance EVs, aerospace

Performance Metrics

This reference provides quick access to key specifications for major battery chemistries used in automotive applications.

Includes detailed comparison charts, safety ratings, and application guidelines.