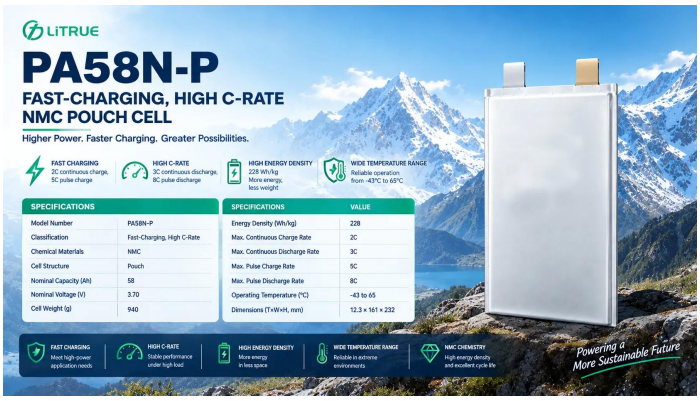
58Ah Fast Charging High C-Rate NMC Battery Cell

Key Specifications

Capacity	58Ah	Voltage	3.7V
Model	PA58N-P	Operating Temp	-43°C - 65°C

Product Overview

Model Number	PA58N-P
Classification	Fast-Charging, High C-Rate
Chemical Materials	NMC
Cell Structure	Pouch
Nominal Capacity (Ah)	58
Nominal Voltage (V)	3.70
Cell Weight (g)	940
Energy Density (Wh/kg)	228
Max. Continuous Charge Rate	2C
Max. Continuous Discharge Rate	3C
Max. Pulse Charge Rate	5C
Max. Pulse Discharge Rate	8C
Operating Temperature (°C)	-43 to 65
Dimensions (T×W×H, mm)	12.3 × 161 × 232



Other Cells in the Fast Charging High C-Rate Cell Series

PC20N-P	20Ah	3.70V	345g	3C/5C	5C/15C	-43℃~65℃	9.6×90×192mm
PC22C-P1	22Ah	3.75V	421g	3C/5C	5C/15C	-43℃~65℃	11.3×90×192mm
PJ28N-P	28Ah	3.70V	463g	2C/5C	5C/15C	-43℃~65℃	10.3×90×231mm
PA50N-P	50Ah	3.70V	820g	2C/3C	5C/8C	-43℃~65℃	10.0×161×232mm
PA58N-P	58Ah	3.70V	940g	2C/3C	5C/8C	-43℃~65℃	12.3×161×232mm
PP50N-P	50Ah	3.70V	818g	2C/3C	5C/8C	-43℃~65℃	11.4×142×232mm
PP56N-P	56Ah	3.70V	925g	2C/3C	5C/8C	-43℃~65℃	13.0×142×232mm

Solution

High-power applications often expose the limits of cells designed around moderate charging and discharge rates. Fast charging creates heat, while takeoff, acceleration, and other peak loads can force

designers to oversize a pack simply to maintain voltage margin.

PA58N-P is a 58Ah NMC pouch cell designed for fast-charging, high C-rate systems. It supports 2C continuous charging, 3C continuous discharge, and up to 8C pulse discharge across a -43°C to 65°C operating range. See LiTrue’ s complete range of battery cells for additional formats and rate profiles.

Application Areas

- Heavy-Lift UAVs: 3C continuous discharge supports sustained propulsion demand, while 8C pulse output covers short takeoff and maneuver events.
- Electric Motorcycles and Performance EVs: fast-charge capability and high-rate discharge help meet demanding charging and acceleration requirements.
- Industrial Robotics and AGVs: supports repeated high-current loads in duty cycles that include rapid acceleration and braking.
- Custom High-Power Battery Packs: the 3.70V platform can be configured in series and parallel for application-specific voltage and capacity targets; explore LiTrue battery-pack solutions for integration support.

FAQs

What current can PA58N-P deliver?

At 58Ah, the 3C continuous discharge rating corresponds to 174A, and the 8C pulse discharge rating corresponds to 464A. Confirm pulse duration, thermal conditions, and protection settings for the final pack.

How quickly can PA58N-P be charged?

The cell is rated for up to 2C continuous charging and 5C pulse charging. The final charging profile must account for temperature, charger control, pack design, and cell qualification requirements.

What nominal pack voltage can I build with PA58N-P?

Each cell is 3.70V nominal. A 12S configuration is 44.4V nominal, and a 14S configuration is 51.8V nominal. Contact LiTrue’ s engineering team to discuss a suitable configuration.

What is the cycle life of PA58N-P?

Cycle-life data for this model should be confirmed with LiTrue engineering or laboratory documentation

before inclusion in a customer specification. Results depend on charge/discharge rate, depth of discharge, temperature, and pack thermal management.