50Ah 8C Pulse NMC Pouch Cell

Key Specifications

Capacity	50Ah	Voltage	3.7V
Model	PP50N-P	Operating Temp	-43℃~65℃

Product Overview

Model Number	PP50N-P
Classification	Fast-Charging, High C-Rate
Chemical Materials	NMC (Lithium Nickel Manganese Cobalt Oxide)
Cell Structure	Pouch
Nominal Capacity (Ah)	50
Nominal Voltage (V)	3.70
Cell Weight (g)	818
Energy Density (Wh/kg)	226
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)	11.4 × 142 × 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

Many high-power battery designs have to choose between compact packaging and peak-current capability. When the cell cannot charge quickly or maintain voltage during a hard load, the usual

workaround is more parallel cells, more weight, and more cost.

PP50N-P is a 50Ah NMC pouch cell designed for that middle ground. It supports 2C continuous charging, 3C continuous discharge, and 8C pulse discharge in an 818g format, allowing pack designers to build for real duty cycles rather than a single worst-case current event. See LiTrue’ s complete range of battery cells for additional formats and rate profiles.

Application Areas

- Industrial UAVs: Supports 3C continuous propulsion demand and 8C pulse output for takeoff, climbing, and payload maneuvers.
- Electric Motorcycles and Performance EVs: Balances fast-charge capability with the high-current delivery needed for acceleration.
- AGVs and Industrial Robotics: Handles repeated acceleration and turnaround charging in demanding operating cycles.
- Custom High-Power Battery Packs: The 3.70V cell platform supports flexible series-parallel configurations for application-specific voltage targets.

FAQs

What current can PP50N-P deliver?

At 50Ah, 3C continuous discharge corresponds to 150A, while 8C pulse discharge corresponds to 400A. Confirm pulse duration, thermal conditions, cable sizing, and protection settings for the final pack.

How quickly can PP50N-P be charged?

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

What pack voltage can I build with PP50N-P?

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

Can PP50N-P operate in cold environments?

Yes. Its stated operating-temperature range is -43°C to 65°C. Actual available capacity, charging behavior, and thermal performance should be validated under the intended application load profile.

What are the sample and production lead times?

Sample availability, MOQ, and production lead time depend on the required configuration and order volume. Reach out to LiTrue’ s applications team to discuss your project requirements.