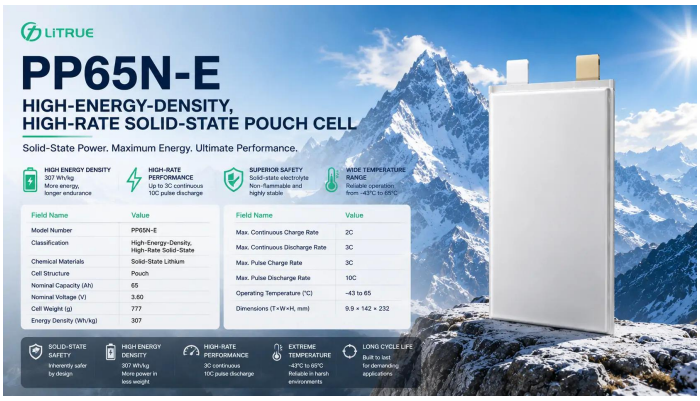
65Ah High-Energy High-Rate Solid-State Battery Cell

Key Specifications

Capacity	65Ah	Voltage	3.6V
Model	PP65N-E	Operating Temp	-43℃~65℃

Product Overview

Model	PP65N-E
Classification	High-Energy-Density, High-Rate Solid-State
Chemical Materials	Solid-State Lithium
Cell Structure	Pouch
Nominal Capacity (Ah)	65
Nominal Voltage (V)	3.60
Cell Weight (g)	777
Energy Density (Wh/kg)	307
Max. Continuous Charge Rate	2C
Max. Continuous Discharge Rate	3C
Max. Pulse Charge Rate	3C
Max. Pulse Discharge Rate	10C
Operating Temperature (°C)	-43 to 65
Dimensions (T×W×H, mm)	9.9 × 142 × 232



Other Cells in the High Energy Density High-Rate Solid-State Series

PT18N-EB	18Ah	3.55V	206g	2C/5C	3C/10C	-43℃~65℃	7.0×74×172mm
PT22N-EB	22Ah	3.55V	250g	2C/5C	3C/10C	-43℃~65℃	8.5×74×172mm
PT25N-EB	25Ah	3.55V	285g	2C/5C	3C/10C	-43℃~65℃	9.6×74×172mm
PT28N-EB	28Ah	3.55V	313g	2C/4C	3C/10C	-43℃~65℃	10.5×74×172mm
PT30N-EB	30Ah	3.55V	334g	2C/4C	3C/10C	-43℃~65℃	11.3×74×172mm
PE30N-EB	30Ah	3.60V	336g	2C/4C	3C/10C	-43℃~65℃	8.8×87×187mm
PE32N-EB	32Ah	3.60V	366g	2C/3C	3C/10C	-43℃~65℃	9.6×87×187mm
PE36N-EB	36Ah	3.60V	404g	2C/3C	3C/10C	-43℃~65℃	10.5×87×187mm
PE40N-EB	40Ah	3.60V	450g	2C/3C	3C/10C	-43℃~65℃	11.6×87×187mm
PE40N-PB	40Ah	3.50V	427g	3C/5C	5C/15C	-43℃~65℃	11.4×87×187mm

PK50N-EB	50Ah	3.55V	568g	2C/4C	3C/10C	-43℃~65℃	10.3×105×230mm
PP45N-E	45Ah	3.60V	548g	2C/4C	3C/10C	-43℃~65℃	7.2×142×232mm
PP54N-E	54Ah	3.60V	657g	2C/3C	3C/10C	-43℃~65℃	8.5×142×232mm
PP65N-E	65Ah	3.60V	777g	2C/3C	3C/10C	-43℃~65℃	9.9×142×232mm
PT30N-EC	30Ah	3.50V	308g	1C/3C	2C/6C	-43℃~65℃	10.5×74×172mm
PE40N-EC	40Ah	3.50V	410g	1C/3C	2C/6C	-43℃~65℃	10.8×87×187mm

Solution

High-power systems are often designed around a compromise: select a high-energy cell and accept reduced peak-current margin, or select a high-rate cell and add mass to recover runtime. That trade-off becomes more difficult when the system must also operate from -43°C to 65°C.

PP65N-E combines 65Ah capacity, 307Wh/kg energy density, 3C continuous discharge, and 10C pulse discharge in a 777g pouch cell. This gives integrators a usable starting point for applications where both sustained power and short high-current events matter. Explore LiTrue’ s complete range of battery cells for additional capacity, format, and rate options.

Application Areas

- Heavy-Lift UAVs: supports sustained propulsion demand at 3C, with 10C pulse capability for takeoff and rapid maneuver events.
- eVTOL and Aviation Power Systems: 65Ah capacity and 307Wh/kg energy density help designers balance usable energy against system mass.
- High-Power Portable Equipment: accommodates applications that require repeated high-current loads rather than steady, low-rate discharge alone.
- Custom Battery Packs: the 3.60V nominal voltage supports series-parallel configurations for tailored DC system voltages; see LiTrue battery-pack solutions for pack integration support.

FAQs

What current can PP65N-E deliver?

At 65Ah, the 3C continuous discharge rating corresponds to 195A, while the 10C pulse discharge rating corresponds to 650A. Confirm pulse duration, cable sizing, thermal design, and protection settings for the final pack.

Can PP65N-E operate in cold and hot environments?

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

What nominal pack voltage can I build with PP65N-E?

Each cell is 3.60V nominal. A 12S configuration is 43.2V nominal, while a 14S configuration is 50.4V nominal. Contact LiTrue’ s engineering team to scope a suitable series-parallel configuration.

What is the cycle life of PP65N-E?

Cycle-life data and test conditions for PP65N-E should be confirmed with engineering or laboratory documentation before being added to a customer specification. The result will depend on depth of discharge, current rate, temperature, and pack thermal management.