

CKAA:Lithium ion battery pack & fast charge solution



Lithium-ion capacitors (LIC) is a kind of hybrid capacitor. Jinpei has advanced research and development capability on lithium-ion capacitors.

At present, Jinpei has completed the R&D of 3.8V 20F-750F CKBA 、 4.2V 80F-1200F CKBB series, 4.2V 100mah-4000mah cylinder CKAA Series monomer lithium-ion capacitors and ultra-fast battery module.

Being commonly used as a source of solutions,electric double layer capacitor (EDLC) and traditional lithium-ion batteries (LIB) in self-discharge characteristics, energy density, reliability, and thermal design aspects of life there are many obvious flaws,Jinpei brand lithium-ion capacitor(LIC) to overcome these problems, It just can make up the defect ofelectric double layer capacitor (EDLC) and lithium-ion batteries (LIB).

Market application covers new energy vehicles, mobile robots, military industry, power, energy storage, power tools, intelligent three meters, 5G/ GPRS/ROLA/NB and other communication power supply, two-wheeler and other emerging industries.



Performance				
A new energy storage device, which integrates supercapacitor andlithium ion battery technology, stores energy through shallow embedding and shallow stripping of lithium ion, and hasintermediate characteristics between supercapacitor and lithium ion battery.	Safety ✓Storage reliable ✓ Overvoltage protection ✓ Material safety, no explosion, no fire	Temperature ✓Available charge at -40°C ✓Available discharge at 85°C	Ratio ✓Continuous charge 20C ✓Continuous discharge 30C ✓Monmentary discharge 50C	Life ✓Physical storage ✓Life> 10,000times ✓100% DOD

Comparion	Lead batteries	Lithium titanium oxide	Jinpei LIC	Lithium phosphate battery	Nickel cobalt manganese
Energy densit (Wh/kg)	40-50	70-80	120-150	150-180	180-220
Lify time	○ 300-400(year)	◎ 5000-10000(over 5years)	◎ 1000 (over 8years)	○ 2000-3000(years)	○ 500-800(2 years)
Charge time (SOC90)	△ 8~10h	◎ ~10min	◎ ~3min	◎ ~1~2h	△ 2~4h
Stability	○ (heavy metal)	○	○	○	△
Low tem characteristic	○	○ (-20°C)	○ (-40°C)	×	×
High charge&discharge	△ (1~3C)	◎ (10~20C)	◎ (20~30C)	△ (1~3C)	△ (1~3C)
Price(1KWh)	low	high	medium	low	medium

CKAA |fast charge | cylinder

Parameter	CKAA18650H	CKAA18650L	CKAA21700H	CKAA21700L
Capacitance	1100mAh	1500mAh	1900mAh	2500mAh
Rate voltage	3.6V	3.6V	3.6V	3.6V
Volt-HI	4.2V	4.2V	4.2V	4.2V
Volt-LO	2.5V	2.5V	2.5V	2.5V
DC internal resistan (10ms)	≤11mΩ	≤11mΩ	≤8mΩ	≤8mΩ
AC internal resistance (1KHZ)	≤15mΩ	≤15mΩ	≤11mΩ	≤11mΩ
Standard charging current	5.5A(5C)	4.5A(3C)	9.5A(5C)	7.5A(3C)
Quick charging current	16.5A(15C)	12A(8C)	28.5A(15C)	20A(8C)
Rated discharge current	11A(15C)	15A(10C)	28.5A(15C)	15A(10C)
Max continuous discharge current	33A(30C)	22.5A(15C)	57A(30C)	22.5A(15C)
Charge temperature range	-30~65°C	-40~55°C	-30~65°C	-40~55°C
Discharge temperature range	-40~85°C	-40~85°C	-40~85°C	-40~85°C
Storage temperature range	-40~55°C	-40~55°C	-40~55°C	-40~55°C
Fast charging cycle life	≥10K tims (10C)	≥5K tims (6C)	≥10K tims (10C)	≥5K tims (6C)
Slow charging cycle life	≥20K tims (1C)	≥10K tims (1C)	≥20K tims (1C)	≥10K tims (1C)
Weight	≤45g	≤45g	≤65g	≤65g
Dimension (D×L) mm	18x65	18x65	21x70	21x70

flash charge graph

