

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.

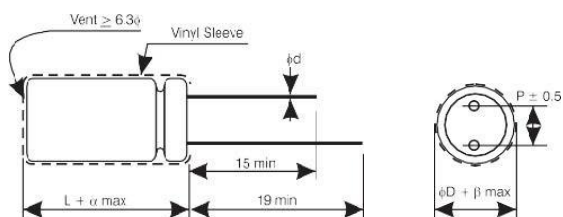
Being commonly used as a source of solutions,electric double layer capacitor (EDLC) and traditional lithium-ion batteries (LIB) in self-discharge characteristics, energy density, reliability, and thermal design aspects of life there are many obvious flaws,Jinpei brand lithium-ion capacitor(LIC) to overcome 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 and lithium ion battery technology, stores energy through shallow embedding and shallow stripping of lithium ion, and has intermediate 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 ✓Momentary discharge 50C	Life ✓Physical storage ✓Life>30,000 times 1C ✓100% DOD

Comparison	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
Life/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



CKBA | fast charge | radial lead

parameter		CKBA 0813	CKBA 0820	CKBA 1013	CKBA 1020	CKBA 1030	CKBA 1313	CKBA 1320	CKBA 1620	CKBA 1640	CKBA 1840
Working Temperature		-40℃~ 70℃									
Work Voltage		2.5~3.8V									
Mix Voltage		2.5V									
(@25±2℃) Standard Capacitance		20F	40F	30F	80F	120F	70F	120F	250F	500F	750F
Tolerance		-20% ~ +80%									
AC(1kHz,3.8V) Resistance		≤500mΩ	≤200mΩ	≤250mΩ	≤150mΩ	≤100mΩ	≤175mΩ	≤100mΩ	≤50mΩ	≤35mΩ	≤25mΩ
Max. discharge current	Continuous	100mA	200mA	150mA	250mA	500mA	250mA	500mA	750mA	2.0A	3.0A
	Pulse (1sec)	0.5 A	1.0A	0.7A	3.0 A	5.0 A	3.0 A	5.0 A	10.0 A	20A	30.0 A
Max charge voltage/current		4.2V 200mA	4.2V 300mA	4.2V 350mA	4.2V 500mA	4.2V 1A	4.2V 500mA	4.2V 1A	4.2V 2A	4.2V 3A	4.2V 5A
Weight (g) Mass		≤1.5	≤2.0	≤2.0	≤3.0	≤6.0	≤3.5	≤5.0	≤8.0	≤16.0	≤20.0
Dimension (D×L) mm		8*13	8*20	10*13	10*20	10*30	13*13	13*20	16*20	16*40	18*40
Optimum storage condition		+10℃-50℃ 60%RH or lower									

CKBB | large capacitance | radial

parameter		CKBB0825 D*L 8*25	CKBB1320 13*20	CKBB 1620 16*20	CKBB1840 18*40
Working Temperature		-25℃~ 60℃			
Work Voltage		2.5-4.2V			
Mix Voltage		2.5V			
(@25±2℃)					
Standard Capacitance		80F/40mAh	250F/120mAh	400F/200mAh	1200F/600mAh
Tolerance		-20% ~ +80%			
AC(1kHz,3.8V) Resistance		≤600mΩ	≤100mΩ	≤50mΩ	≤25mΩ
Max. discharge current	Continuous	400mA	1000mA	4000mA	6000mA
	Pulse (1sec).	1A	2A	5A	10A
Max charge voltage/current		4.2V 200mA	4.2V 600mA	4.2V 2.0A	4.2V 3.0A
Weight(g) Mass		≤2.5	≤5.0	≤8.0	≤20.0
Optimum storage condition		+10℃-50℃ 60%RH or lower			

Flash charge graph

