

# Energy Storage Redefined!

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## CP SERIES

HYBRID SUPERCAPACITOR  
PRISMATIC CELLS



## Hybrid SuperCapacitors

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Musashi's Hybrid SuperCapacitor (HSC) products deliver unparalleled high-power density energy storage to meet the diverse needs of an electrified world with flexible configurations.

Our adoption of the world's first prismatic design for a hybrid supercapacitor has resulted in exceptional durability and much higher heat dissipation efficiency than ordinary cylindrical types. The CP Series Prismatic Cells offer an optimal solution for OEMs and System Integrators seeking to tailor voltages and energy storage capacities according to their specific requirements.

## Key Benefits

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- High operating voltage (3.8V)
- High output ( $\approx 1200A$  charge/discharge)
- High energy density ( $\approx 20wh / L$ )
- Rapid charging/discharging due to large current capabilities (100 A or more)
- High durability (over 1 million 100% discharge / recharge cycles)



### High Power Density

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Saves space in your facility or enclosure



### Long Product Life

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15 to 20 years even in the most challenging environments



### High Cycle Life

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Achieve up to 1M+ full discharge/recharge cycles



### Safe and Reliable

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No thermal runaway and over 3M hours of field operation



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BEYOND**

# CP SERIES

## HYBRID SUPERCAPACITOR PRISMATIC CELLS

# Specification Overview

## Highlights

- Wide operating temperature range without performance degradation (-30°C to 70°C)
- High safety (no thermal runaway concerns)
- Minimal self-discharge (voltage drop at 10,000 hours less than 5%)
- Attractive Total Cost of Ownership with a 15-year lifespan
- Certified to UL 810A



		CPQ3300SD	CPP4100SA
<b>Rated Voltage</b>		<b>3.8V ~ 2.2V</b>	
Initial characteristics	Capacitance(F) minimum	3000F	3800F
	Capacity (Ah)	1.33Ah	1.68Ah
	DC-IR (mΩ)	0.8mΩ	1.13mΩ
	Gravimetric energy density	13Wh/kg	17Wh/kg
	Volumetric energy density	20Wh/L	26Wh/L
	Gravimetric power density	10kW/kg	9kW/kg
	Volumetric power density	15kW/L	13kW/L
	Continuous discharge current	200A	100A
	Maximum discharge current	1300A	1200A
Temperature characteristics (25°C volume ratio)	Lowest temperature in temperature range	75%	75%
	Highest temperature in temperature range	100%	100%
Cycle durability Cycle counts required to 80% capacitance retention		≥1,000,000	≥100,000 (≥800,000@DOD60%)
Operating temperature range - °F / °C		-22°F - 158°F / -30°C - 70°C	-22°F - 158°F / -30°C - 70°C
Dimensions - inches / mm		5.91" x 3.67" x 0.62" / 150.2 x 93.2 x 15.8mm	
Weight - ounces / grams		12.1oz / 343g	11.4oz / 323g

## Characteristics Data

