

- Best of Battery & Supercapacitor Features Combined in one
- Unique Thin Form Factor
- Module Ready Cell Design
- Single cell 3000F/3.8 Volt

Introduction: Spel Technologies Private Limited is Pioneer in high-performance clean energy storage solutions. Based out in Pune, India SPEL is a technology driven entity specializing in design, development, and manufacturing of Polymer Film Capacitors, Supercapacitors, Lithium-Ion Capacitors, Hybrid Lithium-Ion Battery-Capacitor, Hybrid Energy Storage Systems, Lithium-Ion Batteries, Sodium-Ion Batteries, and Graphene Composite Supercapacitors.

G-Series Hybrid Supercapacitors is specially developed, designed and manufactured to offer Industry leading performance offering from best of both the world namely Battery and Supercapacitor combined into single entity as “**Lithium-Ion Capacitor**”.

Lithium-Ion Capacitors (LICs) competes with Supercapacitors in high-power performance, and bridge the gap with batteries in terms of energy density. Lithium-Ion Capacitors have 3 to 4 times more energy density when compared with Supercapacitors. LICs can replace many applications of Supercapacitors and Batteries as Standalone and can be used in tandem with batteries and Fuel cells to enhance power and extend lifetime in various applications.



G-Series HYBRID SUPERCAPACITOR

SPEL G-series *LITHIUM-ION CAPACITORS* – 3000 Farad/3.8VDC

BATTERY-LIKE FEATURES

- ✓ 3.8 V Max Voltage per Cell
- ✓ 18+ Wh/Kg of Energy Density
- ✓ Low Self-Discharge
- ✓ Long Shelf Life
- ✓ Unique Thin Form Factor
- ✓ Module Ready Cell Design

CORE OF CAPACITOR

- ✓ Cycle Life 100,000+
- ✓ Rapid Charging ~30 secs
- ✓ Pulse Power Delivery <1secs
- ✓ Wide Temperature range
-40°C to +70°C
- ✓ Safe & Environment friendly





G-Series HYBRID SUPERCAPACITOR

Electrical Specifications

Module Rated Capacitance	3000 Farads
Rated Voltage (Maximum)	3.8 VDC
Operating Voltage	2.2 VDC to 3.8 VDC
Internal Resistance (DC-ESR, 0.01 Hz @ 25°C)	≤ 2 milli-ohms
Specific Energy	18 Wh/Kg
Energy Density	30 Wh/L
Maximum Specific Power	7.5 kW/Kg
Working Temperature	-40°C to +70°C *
Humidity Range	5-95% RH
Max. Charge and Discharge Current	150 Amps at ≥10°C
Weight	280 gms.
Cell Dimension	241mm x 126mm x 5.2mm ++
Cycle Life	≥100,000 **
Projected DC Life (3.8 VDC @ 25°C)	10 Years +
Self Discharge (Voltage Loss)	<5% over 3 months @ 25°C

Note: Capacitance, ESR and Leakage current are all measured according to IEC 62391-1

* If required then -60°C to +65°C can be provided.

+ Results may vary. Additional terms & Conditions including limited warranty apply at the time of purchase.

++ Product dimensions are for reference only unless otherwise identified, Product dimensions & Specifications may change without Notice.

** Cycle life varies depending upon application-specific characteristics. Actual results will vary.

Lifetime: End of Life Conditions –

Capacitances drop 20% from rated minimum value or increase in DC-ESR by 100% of initial value

Manufactured by:
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