



CAP-XX Dual Cell Supercapacitors

Unparalleled combination of performance and value

The CAP-XX dual cell **supercapacitor** range provides excellent peak power performance at a very competitive cost.

Excellent peak power delivery in a dual cell supercapacitor module

The new CAP-XX GY25R4 range of dual cell supercapacitor modules provides excellent pulse power handling characteristics resulting from the combination of very high capacitance and relatively low ESR.

Each GY25R5 series module is available with either passive or active balancing to equalize cell voltages and minimize leakage current.

The GY25R5 series provides a cost-effective solution to solve the power performance limitations of low power batteries in a range of consumer and industrial applications.

When used in conjunction with a low power energy source such as an energy harvester and or low power battery, the CAP-XX GY25R5 series of cylindrical supercapacitors enable extended back up time, longer battery life, and the provision of peak power as required.

Main features

- High pulse power capability
- Low ESR
- Low leakage current
- Long life
- Meet environmental standards for disposal and operation (RoHS)

Applications

- Energy harvesting for wireless sensors
- Energy harvesting for wireless HVAC sensors and actuators
- Peak power support for GSM/GPRS transmission
- Last gasp power for remote meter status transmission
- Peak power support for locks and actuators
- Peak power support for portable drug delivery systems
- Short term bridging power for battery hot swaps



CAP-XX Dual Cell Supercapacitor

Dual Cell Module Part Numbering Explanation

G	Y	N	vvv	dd	mm	S	ccc	L	B
Model	Cylindrical	no of cells	Voltage	Diameter	Length	Tolerance	µF	Lead alignment & package format	Balancing
		2	5R5 = 5.5V	6C = 6.3mm 08 = 8.0mm 10 = 10mm 1B = 12.5mm	012 = 12mm 068 = 68mm	M ± 20% S +30% /-10% V +25% /-5%	Two digits + number of zeros.	R,S,T = shrink wrap/radial – see datasheet P,Q,O = plastic/radial – see datasheet	R = Resistor ¹ A = Active ²

¹R pair of balancing resistors, 0402 resistors, 100KΩ unless otherwise stated in the order,

²A = CAP-XX active balancing circuit which draws < 1µA. For active balancing, lead alignment, L, must be "S" or "Q".

High Capacitance Supercapacitor Modules

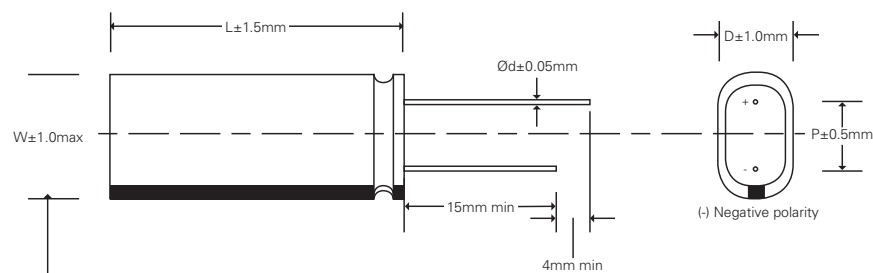
Series-Connected Radial Lead Type / Rated Voltage 5.5V / Temperature Range -40°C to +65°C

CAP-XX Part No. ¹	Capacitance (F)	Diameter (mm)	Length (mm)	DCL max @ 72 Hrs (µA) ²	ESR max @ 1KHz (mΩ)	ESR max @ DC (mΩ)	Power Density (w/Kg)	Max Energy (Wh)	Energy Density (Wh/Kg)
Shrink Wrap									
GY25R50814S474RR	0.47	8	14	2	380	1720	1124	0.0020	1.0
GY25R50818S105RR	1	8	18	6	250	730	2143	0.0042	1.8
GY25R50822S155RR	1.5	8	22	10	200	520	2676	0.0063	2.4
GY25R51022S255RR	2.5	10	22	20	180	340	2537	0.0105	2.5
GY25R51B22S505RR	5	12.5	22	25	120	150	3474	0.0210	3.0
GY25R51B32M755RR	7.5	12.5	32	65	100	120	3195	0.0315	3.3
GY25R51628M126RR	12.5	16	28	90	70	100	2342	0.0525	3.4
Plastic Package									
GY25R50916S474PR	0.47	9	16	2	360	1470	376	0.0020	0.3
GY25R50920S105PR	1	9	20	6	200	730	822	0.0042	0.7
GY25R50924S155PR	1.5	9	24	10	190	530	1078	0.0063	1.0
GY25R51125S255PR	2.5	11	24	25	140	330	1161	0.0105	1.1

¹Part numbers shown for lead orientation R, P and for balancing resistors, R.

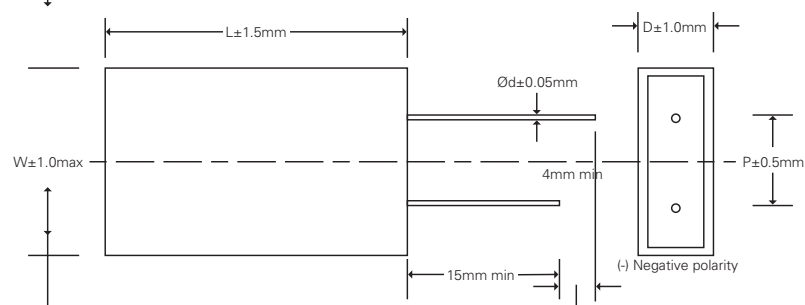
²Leakage current will be affected by the balancing solution used. Contact CAP-XX to determine which balancing solution best suits your design.

Shrink Wrap Package and Lead Alignment "R"



D (mm)	W (mm)	P (mm)
8	16	11.5
10	20	15.5
12.5	25	18.0

Plastic Package and Lead Alignment "P"



D (mm)	W (mm)	P (mm)
9	18	11.5