

SPG 12V - 90Ah | VRLA GEL Battery

SPG are sealed valve-regulated lead acid recombinant batteries that are non-spillable and maintenance-free. Although initially more expensive to purchase than AGM they offer a lower total cost to own over the life of the battery. When it comes to performance and life span the SPG batteries outperform other technologies and provide the greatest value for your stand-by application or cycling needs.

Technical Features

- Micro millimeter SiO₂ and H₂SO₄ gelled electrolyte technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.
- Case and cover available in both standard and flame retardant ABS.

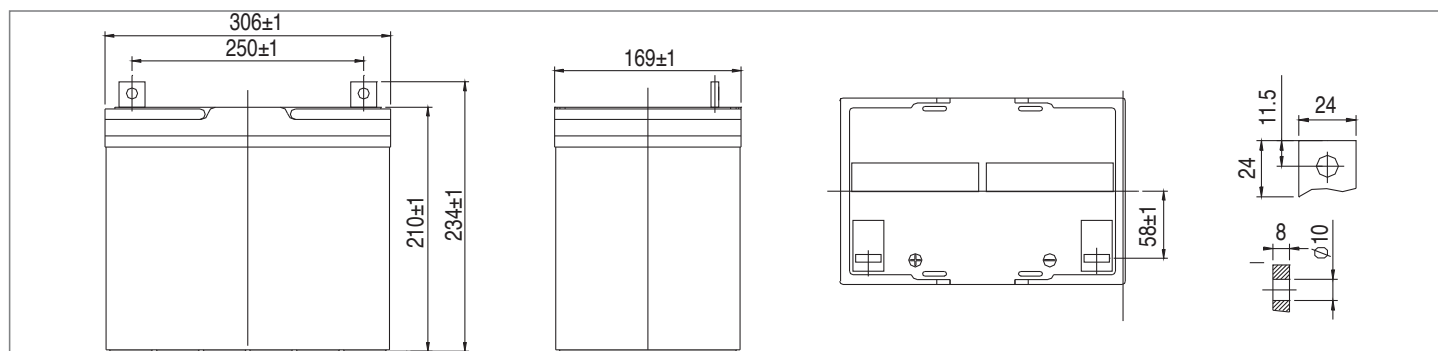
Specifications

Nominal Voltage	12 V	
Number of cells	6	
Design Life	12 years	
Dimensions	Length	306 mm
	Width	169 mm
	Height	210 mm
	Total Height	234 mm
Approx. Weight	30 kg	
Nominal Capacity (25°C)	20 hours rate (4.6 A, 10.5 V)	92 Ah
	10 hours rate (9.1 A, 10.5 V)	91 Ah
	5 hours rate (16.2 A, 10.5 V)	81 Ah
	1 hour rate (62.0 A, 9.6 V)	62 Ah
Max. Discharge Current (25°C)	800 A (5s)	
Short Circuit Current	2000 A	
Internal Resistance	5.4 mOhms	
Fully Charged battery (25°C)		
Self-Discharge	3% of capacity declined per month at 20°C (average)	
Operating Temperature Range	Discharge	-20~60°C
	Charge	-10~60°C
	Storage	-20~60°C
Charge Methods:	Standby use:	No charging current limit is required
	Charging voltage:	13.38-13.68 Volts
	Cyclic use: Maximum charging current:	
	Charging voltage:	14.28-14.52 Volts
	Temperature compensation:	stand by -20 mV/°C; cyclic use -30 mV/°C

Battery Construction

Component	Positive Plate	Negative Plate	Container	Cover	Safety Valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Pb	Fiberglass	Gelled acid

Dimensions



Constant Current Discharge (Amperes) at 25°C

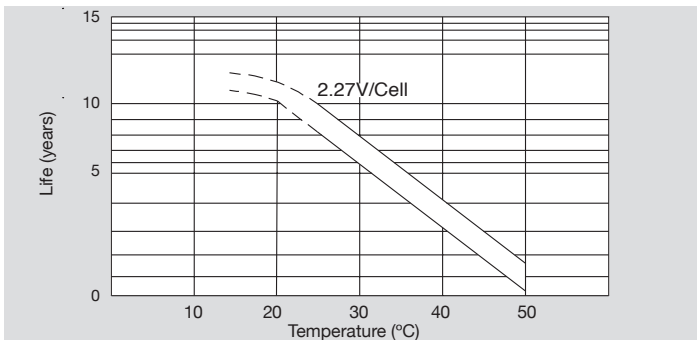
End Voltage (Volts/Cell)	5min	10min	15min	30min	45min	1h	3h	5h	10h
1.60 V	288	218	173	100.0	74.7	62.0	27.0	17.2	9.30
1.65 V	269	208	162	95.0	71.5	56.6	26.0	17.0	9.25
1.70 V	252	186	153	90.0	67.9	56.0	25.0	16.7	9.18
1.75 V	228	175	142	87.3	65.5	54.6	24.2	16.2	9.10
1.80 V	203	163	132	84.2	63.0	52.4	23.1	15.7	9.00

Constant Power Discharge (Watts/Cell) at 25°C

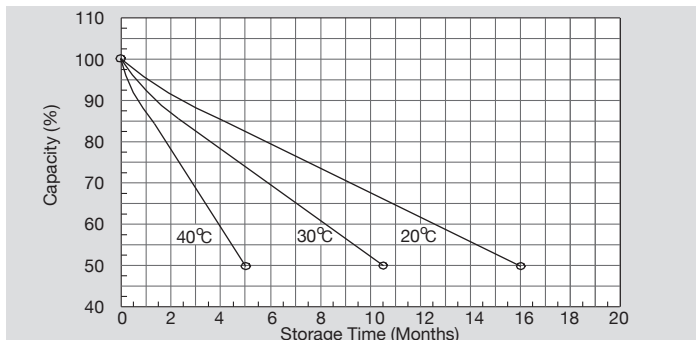
End Voltage (Volts/Cell)	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60 V	516	373	308	189	145	117	65.5	48.3	32.3
1.65 V	503	364	303	180	139	112	64.1	48.2	31.9
1.70 V	452	345	284	171	129	107	61.8	46.8	31.5
1.75 V	425	343	281	167	128	103	59.8	45.4	30.7
1.80 V	391	314	267	163	125	101	59.1	45.2	30.3

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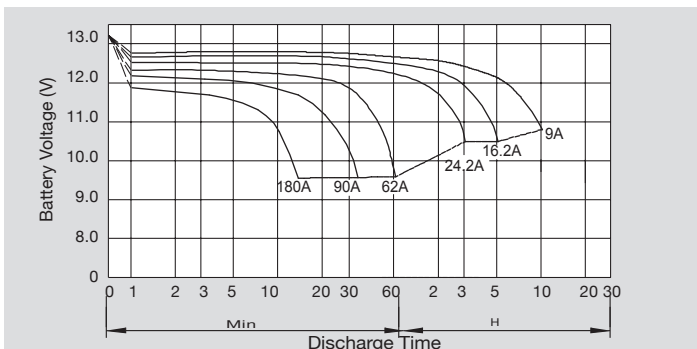
Temperature Effects on Float Life



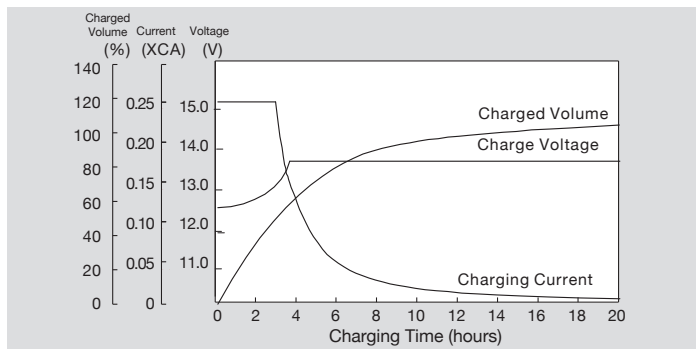
Self Discharge Characteristics



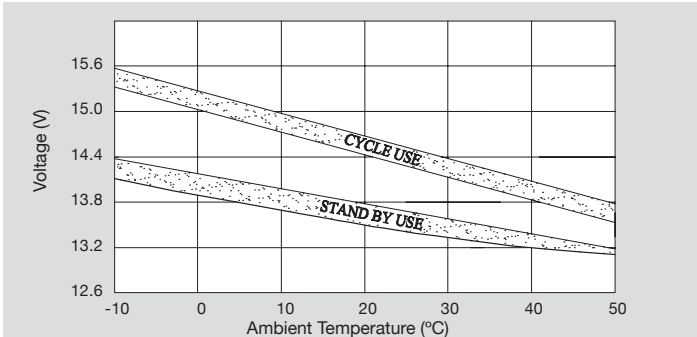
Discharge Characteristics (25°C)



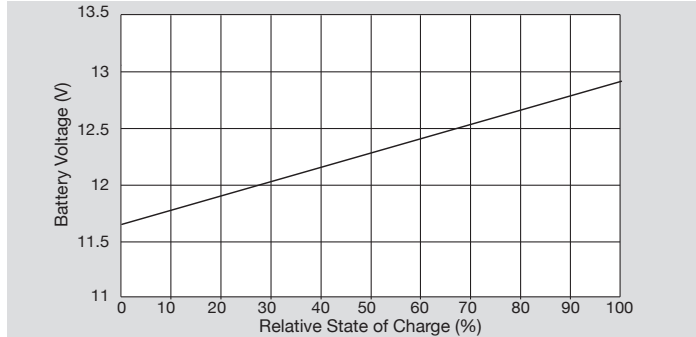
Constant Voltage Charging Characteristic (0.25 CA, 25°C)



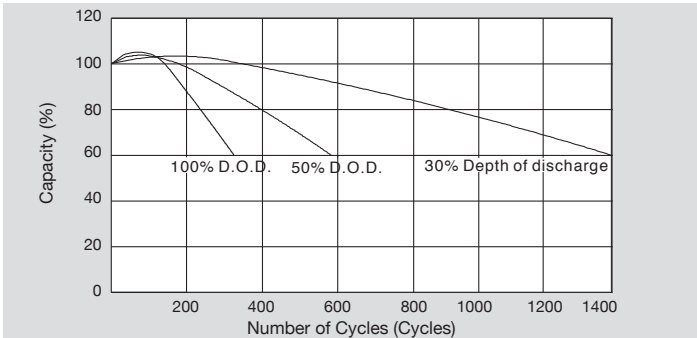
Relationship Between Charging Voltage and Temperature



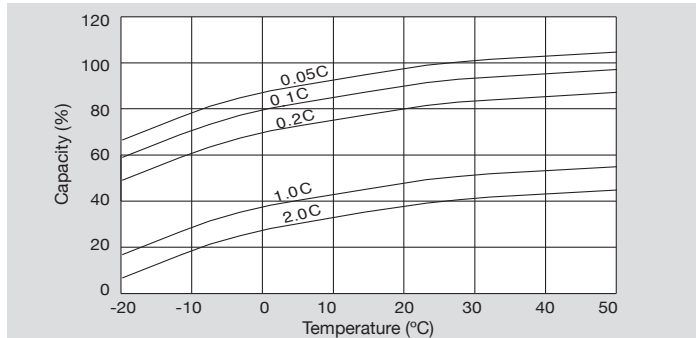
Relationship of OCV and State of Charge (25°C)



Cycle Service Life in Relation to Depth of Discharge



Temperature Effects on Capacity



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