

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.

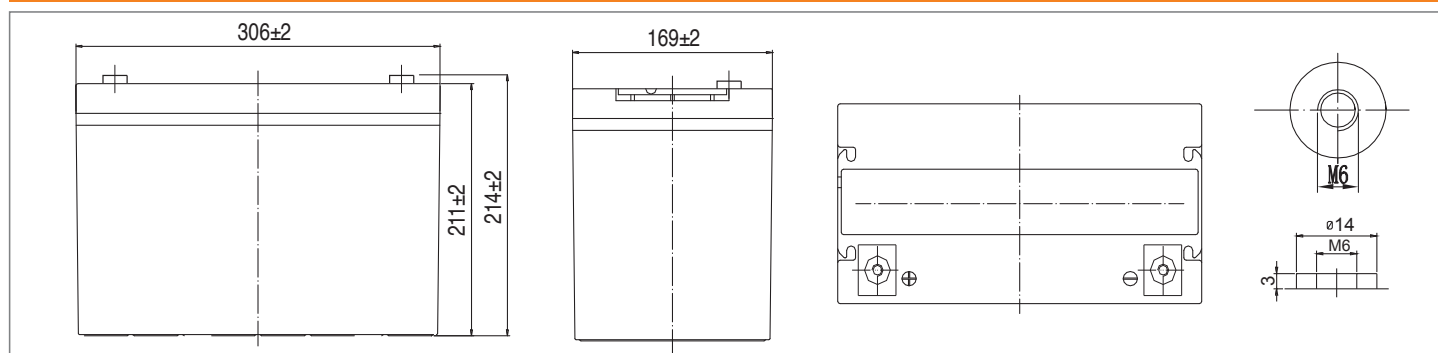
Specifications

Nominal Voltage	12 V		
Number of cells	6		
Design Life	12 years		
Dimensions	Length	306 mm	
	Width	169 mm	
	Height	211 mm	
	Total Height	214 mm	
Approx. Weight	27.2 kg		
Nominal Capacity (25°C)	20 hours rate (4.64 A, 10.8 V)	92.8 Ah	
	10 hours rate (9.00 A, 10.8 V)	90.0 Ah	
	5 hours rate (14.90 A, 10.5 V)	74.5 Ah	
	1 hour rate (54.00 A, 9.6 V)	54.0 Ah	
Max. Discharge Current (25°C)	720 A (5s)		
Short Circuit Current	2220 A		
Internal Resistance	6.5 mOhms		
Fully Charged battery (25°C)	6.5 mOhms		
Self-Discharge	3% of capacity declined per month at 25°C (average)		
Operating Temperature Range	Discharge	:-15~50°C	
	Charge	:-10~50°C	
	Storage	:-20~50°C	
Max. Charging Current	18.0 A		
Charging Characteristics (25°C)	Float Charging Voltage	13.50 V to 13.80 V	
	Temperature Compensation	-18 mV/°C	
	Cyclic Charging Voltage	14.40 V to 14.70 V	
	Temperature Compensation	-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)	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60 V	149	137	86.4	54.0	32.4	22.0	17.4	15.2	10.8	9.16	4.72
1.65 V	144	134	84.7	53.2	32.2	21.9	17.3	15.1	10.8	9.14	4.71
1.70 V	138	129	82.1	51.8	32.0	21.8	17.2	15.0	10.7	9.12	4.70
1.75 V	132	124	80.1	50.8	31.5	21.6	17.1	14.9	10.6	9.06	4.67
1.80 V	125	118	77.2	49.2	30.7	21.0	16.6	14.5	10.3	9.00	4.64

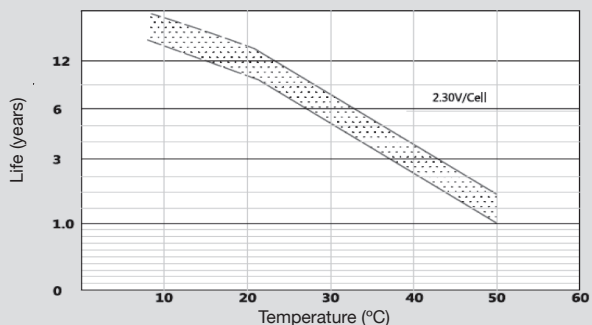
Constant Power Discharge (Watts) at 25°C

End Voltage (Volts/Cell)	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60 V	1604	1502	969	616	376	259	205	180	129	109	56.6
1.65 V	1556	1466	950	606	373	258	204	179	128	109	56.5
1.70 V	1492	1412	921	591	370	256	203	178	127	109	56.3
1.75 V	1427	1364	899	579	364	254	201	177	126	108	56.0
1.80 V	1347	1292	866	561	355	246	195	171	122	107	55.6

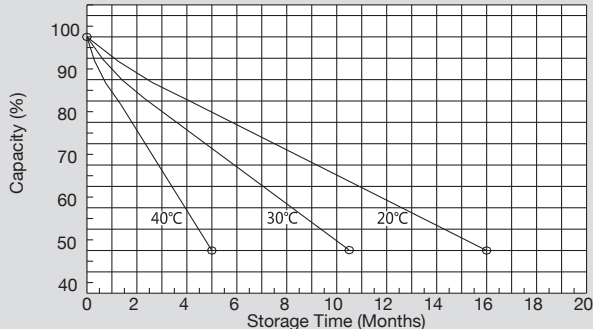
Note: The above characteristics data can be obtained within three charge/discharge cycles.

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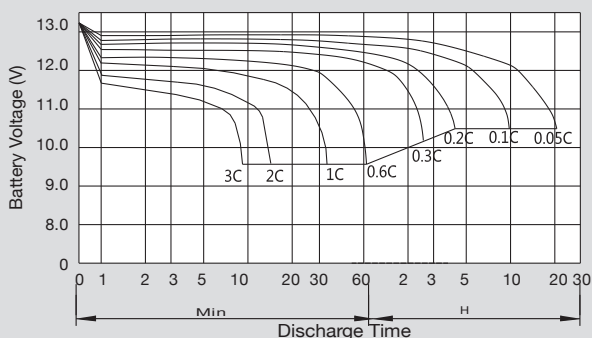
Temperature Effects on Float Life



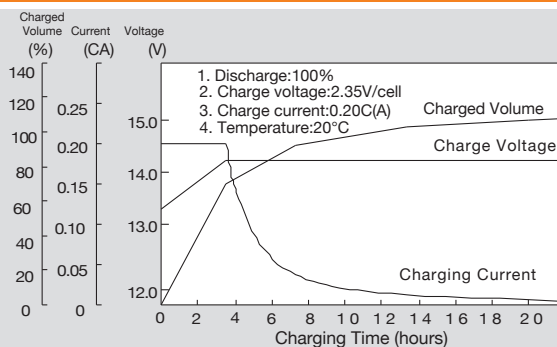
Self Discharge Characteristics



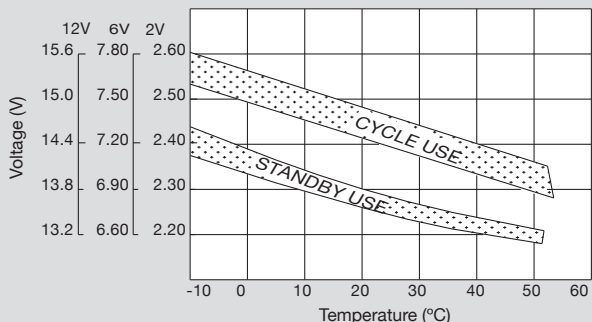
Discharge Characteristics (25°C)



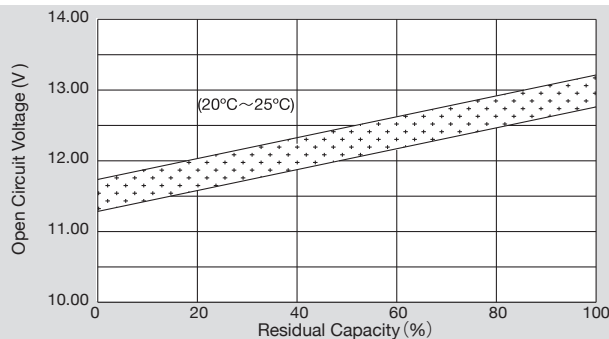
Charging Characteristics (25°C)



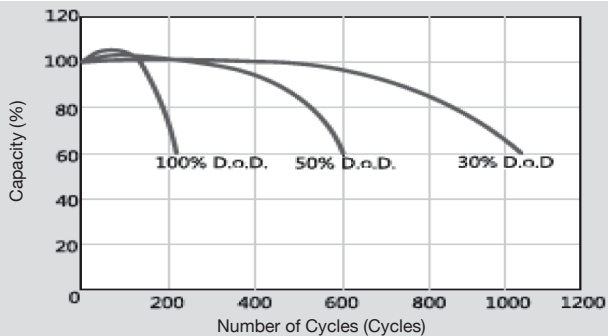
Relationship Between Charging Voltage and Temperature



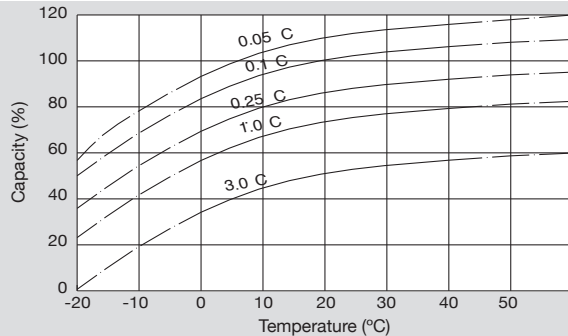
Relationship Between OCV and Residual Capacity (25°C)



Cycle Service Life in Relation to Depth of Discharge



Temperature Effects on Capacity



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