

# SPG 12V - 250Ah | 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 SiO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> 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.

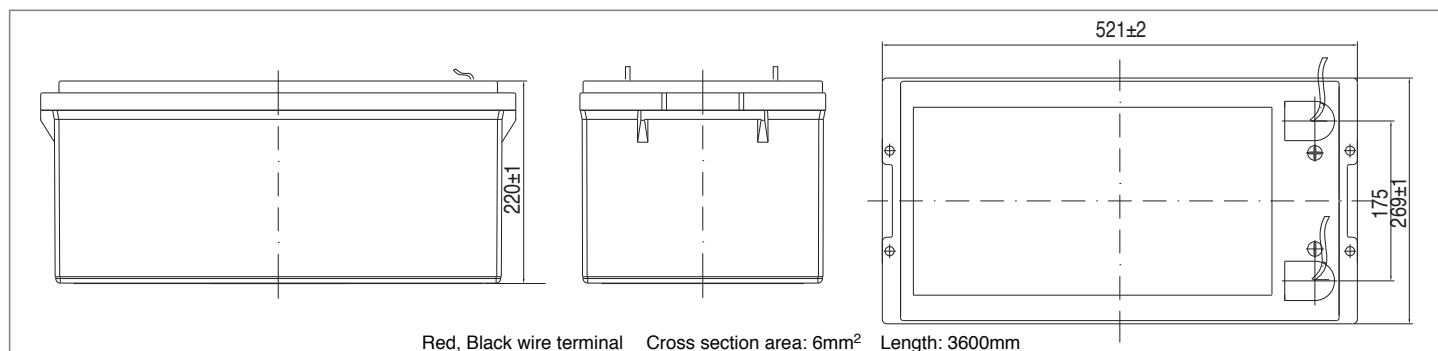
## Specifications

Nominal Voltage	12 V	
Number of cells	6	
Design Life	12 years	
Dimensions	Length	521 mm
	Width	269 mm
	Height	220 mm
	Total Height	220 mm
Approx. Weight	74 kg	
Nominal Capacity (25°C)	20 hours rate (13.1 A, 10.5 V)	262.0 Ah
	10 hours rate (25.2 A, 10.5 V)	252.0 Ah
	5 hours rate (43.5 A, 10.5 V)	217.5 Ah
	1 hour rate (160.0 A, 9.6 V)	160.0 Ah
Max. Discharge Current (25°C)	1250 A (5s)	
Short Circuit Current	4300 A	
Internal Resistance	3 mΩ	
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:	
	Constant Voltage Charge (25°C) 30% of rated capacity	
	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	Copper	Fiberglass	Gelled acid

## Dimensions



## Constant Current Discharge (Amperes) at 25°C

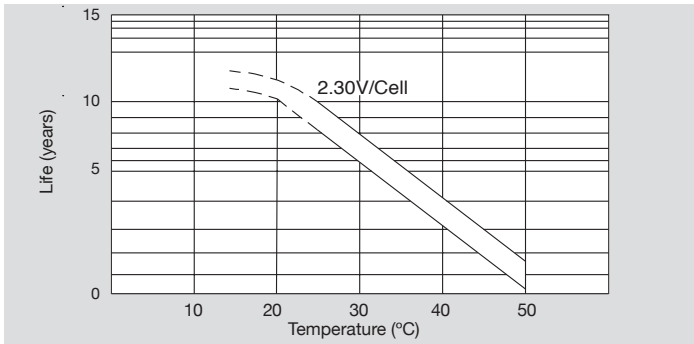
End Voltage (Volts/Cell)	1h	3h	5h	6h	8h	10h	20h
1.60 V	160	72.3	47.2	40.5	31.5	25.6	13.2
1.65 V	153	69.5	45.5	39.5	31.2	25.4	13.2
1.70 V	150	68.3	44.8	38.5	30.5	25.3	13.1
1.75 V	146	66.3	43.5	37.7	30.2	25.2	13.1
1.80 V	142	64.2	42.5	36.8	30.0	25.0	13.0

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

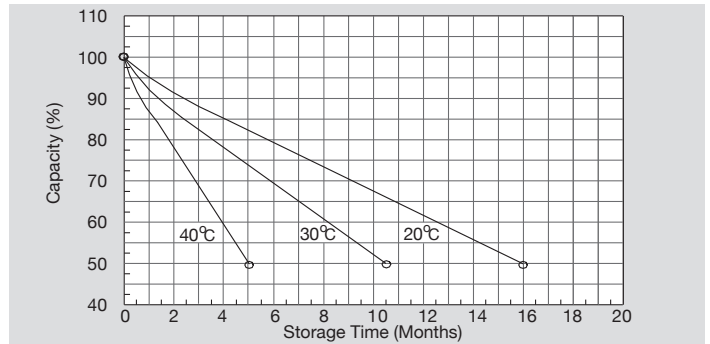
End Voltage (Volts/Cell)	1h	2h	3h	5h	6h	8h	10h
1.60 V	300	182	135	91.0	78.0	62.0	51.4
1.65 V	291	175	133	88.2	76.4	61.1	51.0
1.70 V	285	172	131	87.0	75.2	60.5	50.5
1.75 V	278	165	127	85.2	73.5	60.0	50.0
1.80 V	268	160	123	83.2	72.3	59.0	49.4

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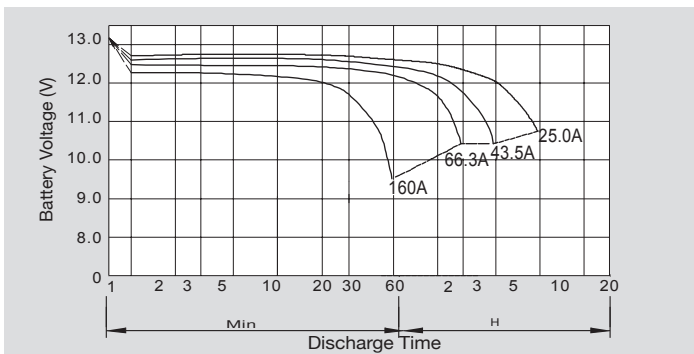
## Temperature Effects on Float Life



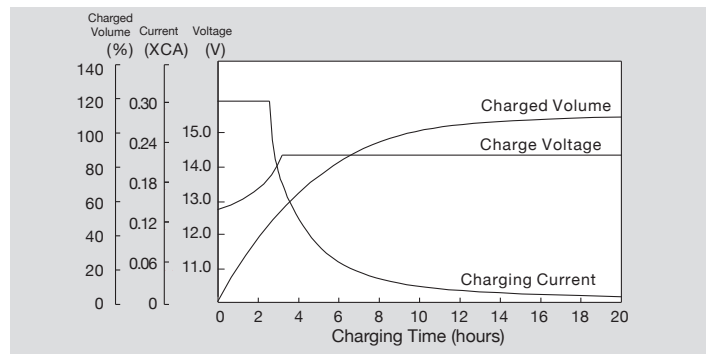
## Self Discharge Characteristics



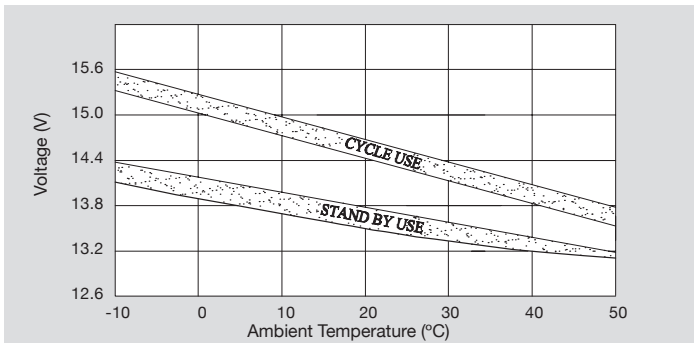
## Discharge Characteristics (25°C)



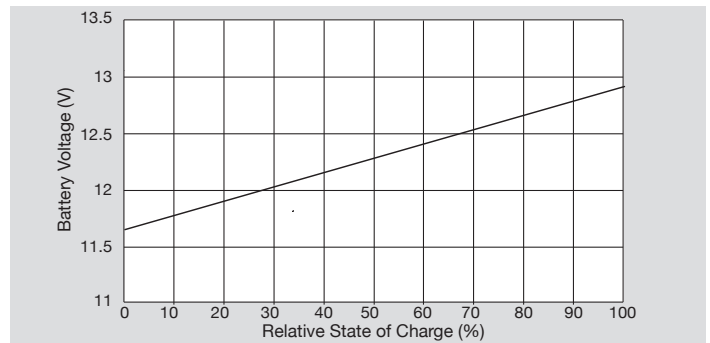
## Constant Voltage Charging Characteristic (0.3 CA, 25°C)



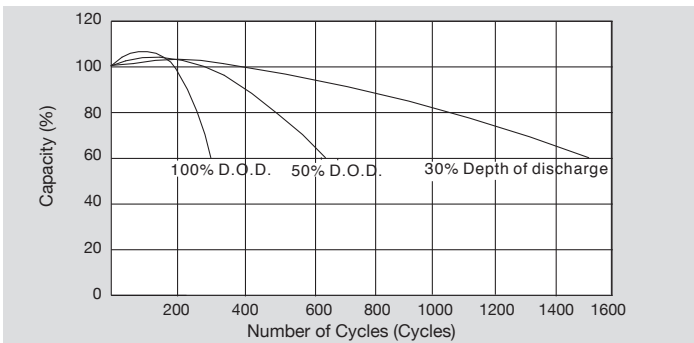
## Relationship Between Charging Voltage and Temperature



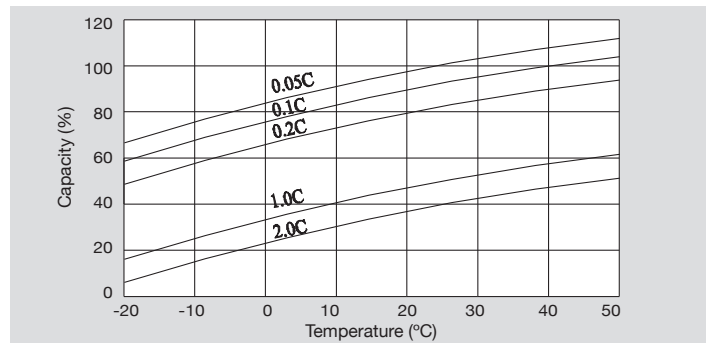
## Relationship of OCV and State of Charge (25°C)



## Cycle Service Life in Relation to Depth of Discharge



## Temperature Effects on Capacity



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