

# SPG 12V - 120Ah | 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.

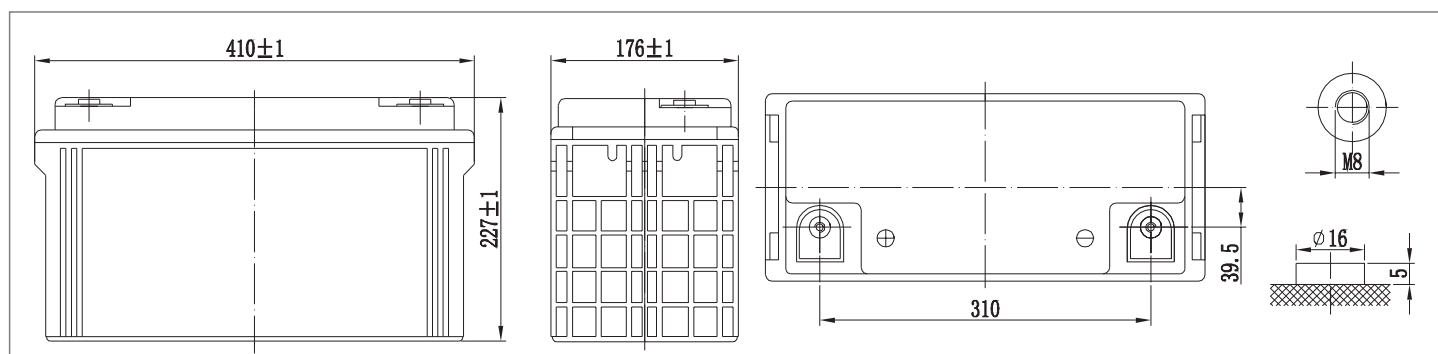
## Specifications

Nominal Voltage	12 V	
Number of cells	6	
Design Life	12 years	
Dimensions	Length	410 mm
	Width	176 mm
	Height	227 mm
	Total Height	227 mm
Approx. Weight	38 kg	
Nominal Capacity (25°C)	20 hours rate (6.3 A, 10.5 V)	126.0 Ah
	10 hours rate (12.1 A, 10.5 V)	121.0 Ah
	5 hours rate (20.0 A, 10.5 V)	100.0 Ah
	1 hour rate (71.6 A, 9.6 V)	71.6 Ah
Max. Discharge Current (25°C)	950 A (5s)	
Short Circuit Current	2250 A	
Internal Resistance	4.3 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
Constant Voltage Charge (25°C)	Temperature compensation:	stand by -20 mV/°C; cyclic use -30 mV/°C
	30% of rated capacity	

## 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

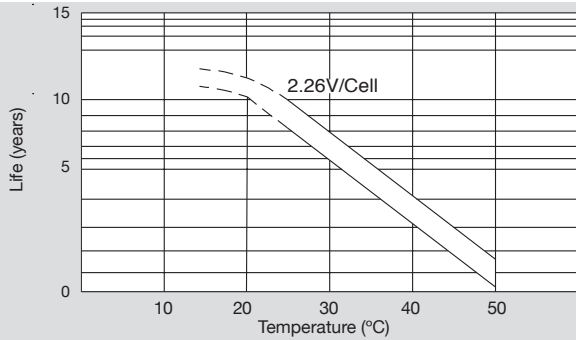
End Voltage (Volts/Cell)	5min	10min	15min	30min	45min	1h	3h	5h	10h
1.60 V	343	250	196	120	87.7	71.6	32.0	21.0	12.5
1.65 V	329	245	195	116	86.1	71.1	31.5	21.0	12.3
1.70 V	303	223	187	112	83.8	69.7	31.0	20.7	12.2
1.75 V	277	210	179	108	81.0	67.5	30.5	20.0	12.1
1.80 V	253	197	167	106	78.9	65.4	28.1	19.3	12.0

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

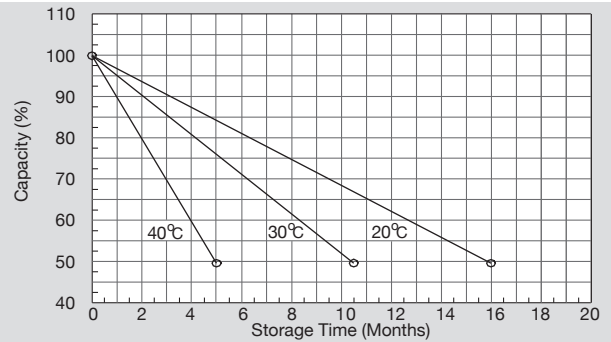
End Voltage (Volts/Cell)	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60 V	603	449	370	227	172	141	79.6	59.2	39.5
1.65 V	567	426	358	220	171	137	76.8	56.6	38.9
1.70 V	530	404	346	213	157	131	74.0	55.0	38.3
1.75 V	494	383	334	206	154	128	72.6	54.1	37.4
1.80 V	466	358	310	199	150	124	70.8	53.0	37.0

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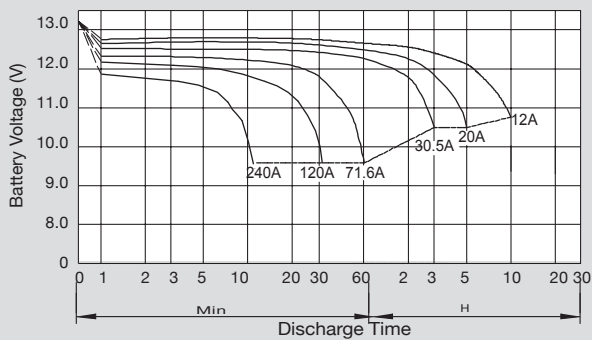
### Temperature Effects on Float Life



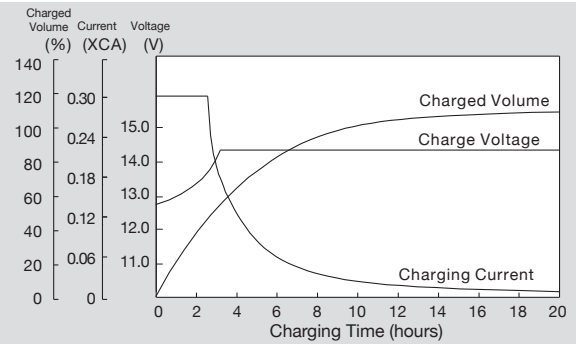
### Self Discharge Characteristics



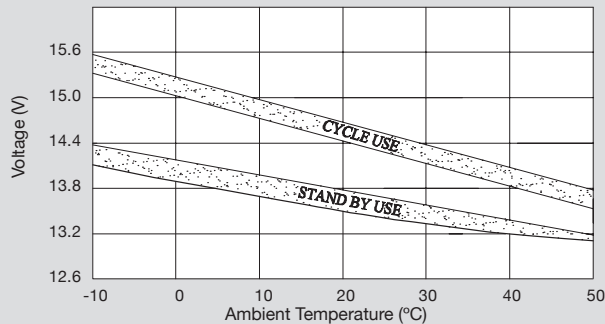
### Discharge Characteristics (25°C)



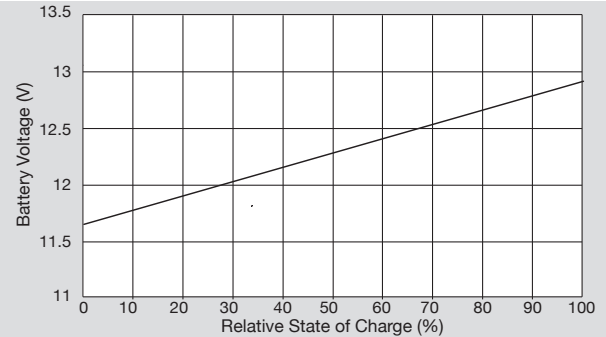
### Constant Voltage Charging Characteristic (0.3 CA, 25°C)



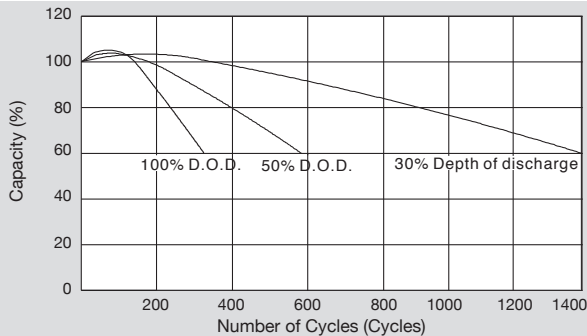
### Relationship Between Charging Voltage and Temperature



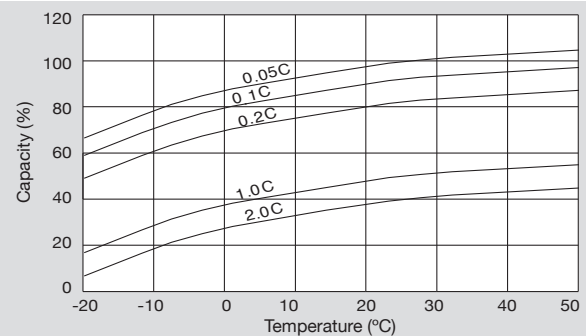
### Relationship of OCV and State of Charge (25°C)



### Cycle Service Life in Relation to Depth of Discharge



### Temperature Effects on Capacity



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