



VRLA 12V105AH

SA12V105C

Specifications

Nominal Voltage	12 V
Nominal Capacity 20HR	105AH
Dimensions	Length 306±1mm (12.05 inches)
	Width 169±1mm (6.65 inches)
	Container Height 210±1mm (8.27 inches)
	Total Height [with terminal] 215±1mm (8.46 inches)
Approx Weight	Approx 26.5 kg (58.4 lbs)
Terminal	M6
Container Material	ABS Plastic
Lead Material	Purity Lead 99.995%
Sulfuric Acid	Distilled Sulfuric Acid (Zero metal content)
Separator	AGM
Rated Capacity	5.25A/105AH (20hr, 1.80V/cell, 25°C/77°F)
	9.8A/98AH (10hr, 1.80V/cell, 25°C/77°F)
	16.1A/80.5AH (5hr, 1.75V/cell, 25°C/77°F)
	24.0A/72AH (3hr, 1.75V/cell, 25°C/77°F)
	61.1A/61AH (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	900A (5s)
Internal Resistance	Approx 57mΩ
Operating Temp.Range	Discharge : -15 - 60°C (5 - 122°F)
	Charge : 0 - 60°C (32 - 104°F)
	Storage : -15 - 60°C (5 - 104°F)
Nominal Operating Temp.Range	25±3°C (77±5°F)
Cycle Use	Initial Charging Current less than 31.5A. Voltage 14.5V - 14.9V at 25°C (77°F) Temp.Coefficient -30mV/°C
Standby Use	No limit on Initial Charging Current Voltage 13.5V - 13.8V at 25°C (77°F) Temp.Coefficient -20 mV/°C
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	Zeal AGM series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.



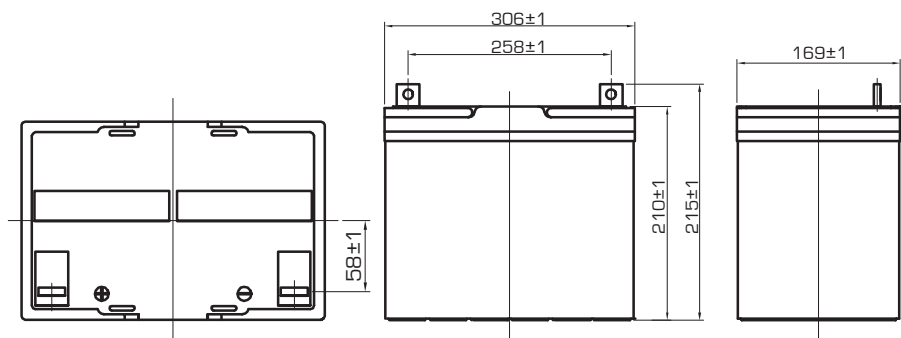
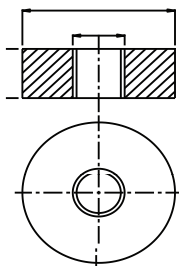
Applications

- All purpose
- Standby Applications
- Recreation Vehicles
- Uninterruptible Power Supply (UPS)
- Electric Power System (EPS)
- Fire & Security
- Generators
- Medical Equipment

Dimensions

▲ M6 Terminal

Unit: mm (inches)



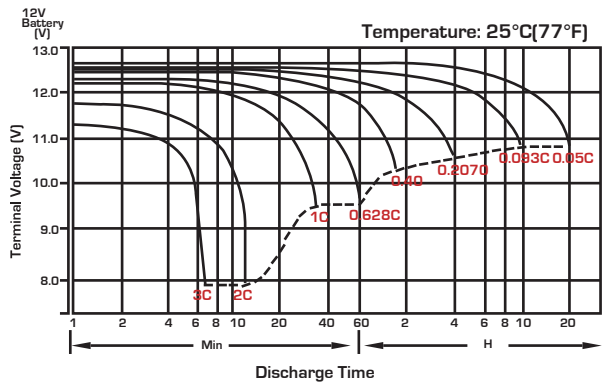
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	10min	15min	30min	45min	1h	3h	5h
1.80V/cell	157	128	82.1	61.8	51.6	22.9	15.6
1.75V/cell	168	138	85.2	64.2	53.8	24.0	16.1
1.70V/cell	179	149	97.8	66.6	55.2	24.8	16.6
1.65V/cell	200	157	92.7	70.1	55.8	25.7	16.9
1.60V/cell	210	168	97.6	73.2	61.1	26.7	17.1

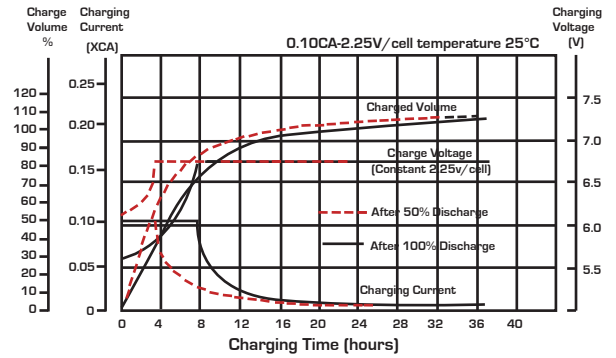
Constant Power Discharge (Watts/Cell) at 25°C (77°F)

F.V/Time	5min	10min	15min	30min	45min	1h	3h	5h
1.80V/cell	372	302	128	159	123	99.5	44.8	30.1
1.75V/cell	405	330	138	163	125	101	45.0	30.5
1.70V/cell	430	332	276	167	126	105	46.3	31.3
1.65V/cell	479	350	294	176	136	110	47.7	31.7
1.60V/cell	491	359	299	184	142	115	47.8	32.1

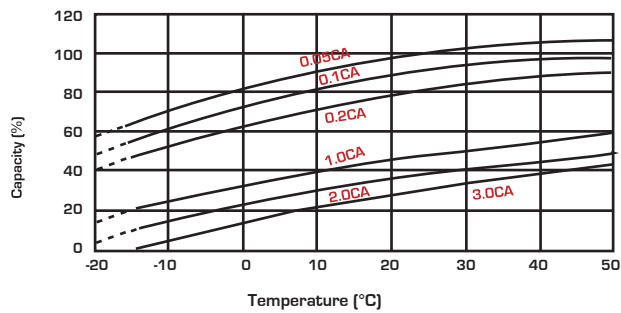
Discharge Characteristics



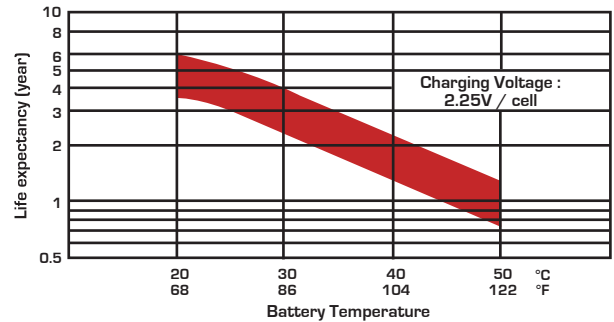
Float Charging Characteristics



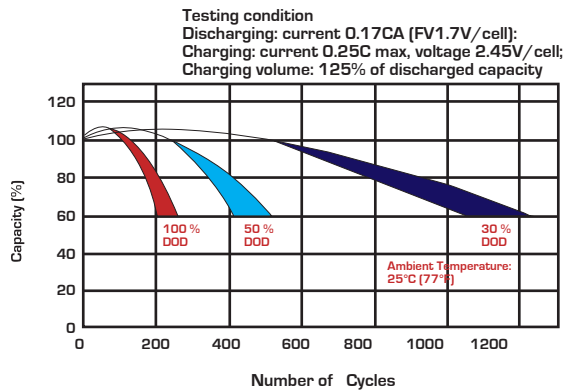
Temperature Effects in Relation to Battery Capacity



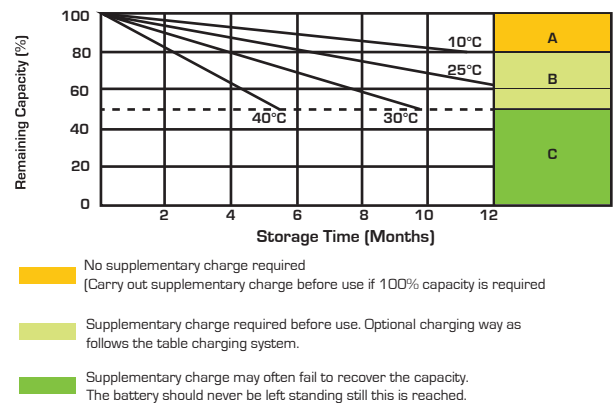
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



Charging System

DOD	Current Limit (A)	Constant Voltage (V)	Fully Charged Time (h)
20	0.15C ₁₀	13.5-13.8 vpc (12V)	10
	0.20C ₁₀	6.75-6.9 vpc (6V)	8
50	0.15C ₁₀	13.5-13.8 vpc (12V)	15
	0.20C ₁₀	6.75-6.9 vpc (6V)	12
80	0.15C ₁₀	13.5-13.8 vpc (12V)	16
	0.20C ₁₀	6.75-6.9 vpc (6V)	14
100	0.15C ₁₀	13.5-13.8 vpc (12V)	20
	0.20C ₁₀	6.75-6.9 vpc (6V)	18

State of Charge (SOC)

Open Circuit Voltage (V/cell)	Open Circuit Voltage (12V/cell)	Open Circuit Voltage (6V/cell)	State of Charge [% of full charge capacity]
2.14-2.15	12.84-12.90	6.42-6.46	100
2.12-2.13	12.72-12.78	6.36-6.39	90
2.11	12.66	6.33	80
2.09	12.54	6.27	70
2.07	12.42	6.21	60
2.05	12.30	6.15	50



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