

AccuForce 12V - 33Ah | VRLA Battery



Applications

- Uninterruptible Power Supplies (UPS)
- Electric Power Systems (EPS)
- Emergency backup power supplies
- Electronic apparatus and equipment
- Communication power supplies
- DC power supplies
- Auto control system



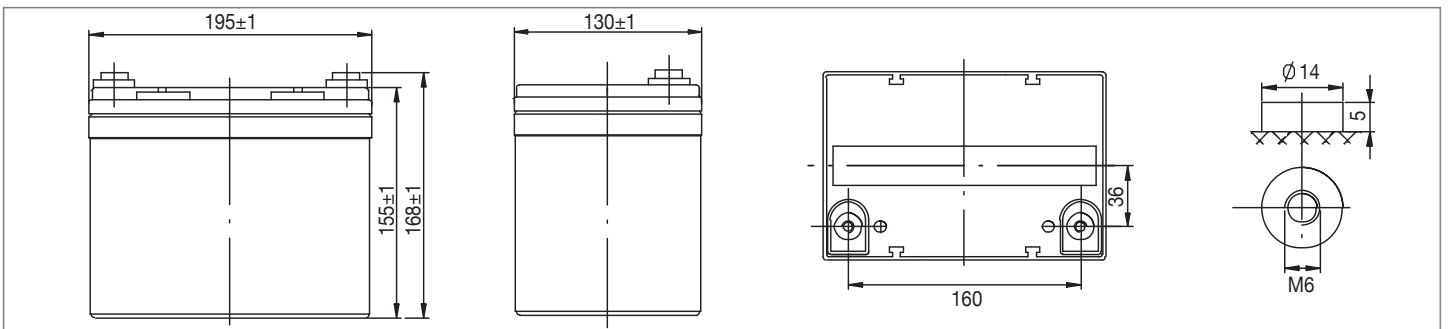
Specifications

Nominal Voltage	12 V	
Number of cells	6	
Design Life	10 years	
Dimensions	Length	195 mm
	Width	130 mm
	Height	155 mm
	Total Height	168 mm
Approx. Weight	9.7 kg	
Nominal Capacity (25°C)	10 hours rate (3.30 A, 10.8 V)	33.0 Ah
	5 hours rate (5.58 A, 10.5 V)	27.9 Ah
	1 hour rate (22.3 A, 9.6 V)	22.3 Ah
Max. Discharge Current (25°C)	330 A (5s)	
Internal Resistance	12 mOhms	
Fully Charged battery (25°C)		
Self-Discharge	3% of capacity declined per month at 20°C (average)	
	Discharge	-10~60°C
	Charge	-10~55°C
Operating Temperature Range	Storage : -20~60°C	
	Short Circuit Current	
Charge Methods:	850 A	
	Cycle use	2.40-2.45 Vpc
	Maximum charging current	9.9 A
	Temperature compensation	-30 mV/°C
Constant Voltage Charge (25°C)	Standby use	2.20-2.30 Vpc
	Temperature compensation	-20 mV/°C

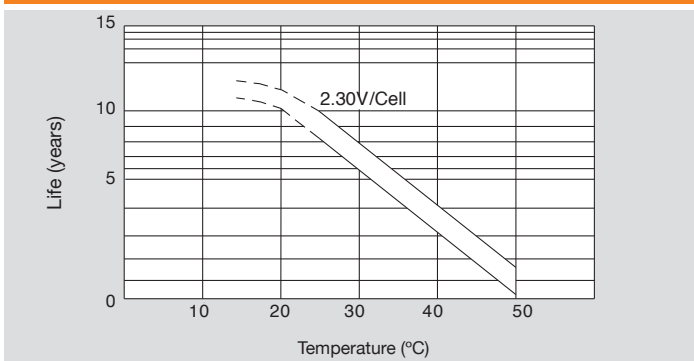
Battery Construction

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

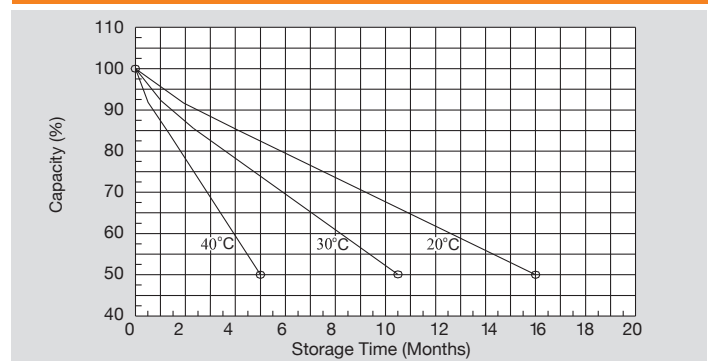
Dimensions



Temperature Effects on Float Life

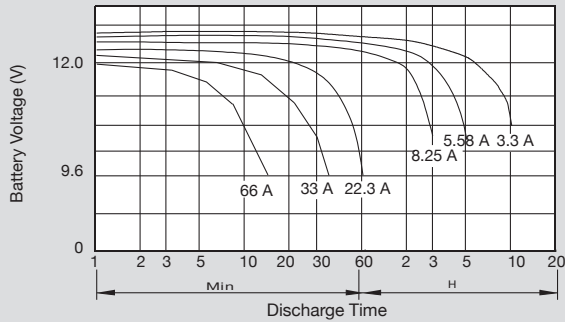


Self Discharge Characteristics

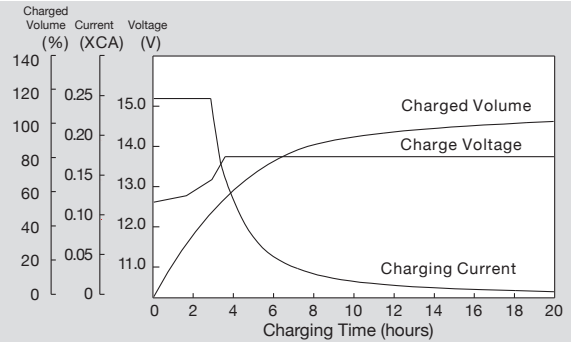


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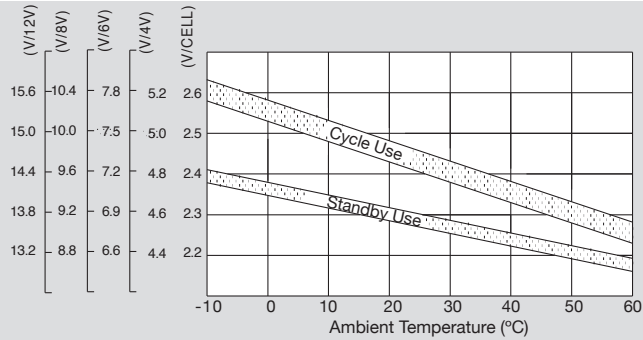
Discharge Characteristics (25°C)



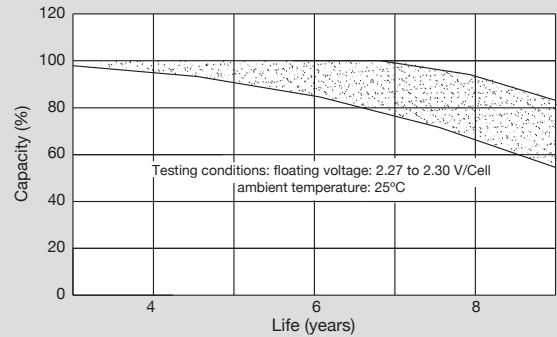
Constant Voltage Charging Characteristic (0.25 CA, 25°C)



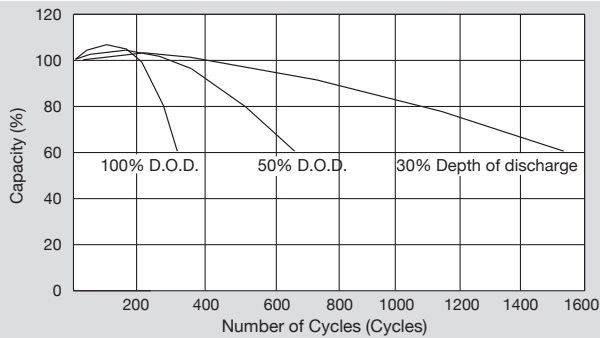
Relationship Between Charging Voltage and Temperature



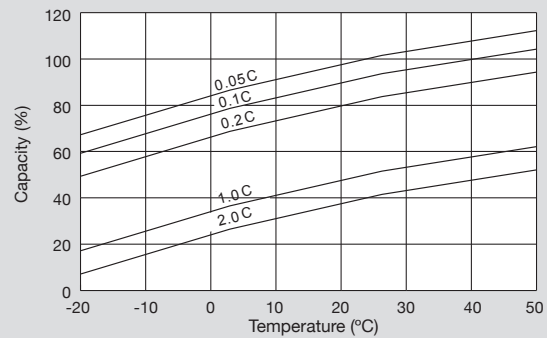
Life Characteristics of Standby Use



Cycle Service Life in Relation to Depth of Discharge



Temperature Effects on Capacity



Constant Current Discharge (Amperes) at 25°C

End Voltage (Volts/Cell)	10 min	15 min	30 min	1 h	3 h	5 h	10 h	20 h
1.60 V	69.3	57.1	32.6	22.3	9.08	6.30	3.36	1.81
1.65 V	65.0	54.1	31.3	21.9	8.97	6.25	3.35	1.79
1.70 V	60.0	51.4	30.4	21.2	8.45	6.15	3.32	1.78
1.75 V	56.1	47.8	29.4	20.3	8.25	5.58	3.31	1.76
1.80 V	51.4	44.8	28.8	19.8	8.18	5.50	3.30	1.75

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

End Voltage (Volts/Cell)	10 min	15 min	30 min	45 min	1 h	2 h	3 h	5 h
1.60 V	122	100	65.3	45.5	40.9	23.3	17.4	12.2
1.65 V	116	98.6	61.7	44.2	40.5	23.1	17.3	11.9
1.70 V	110	95.7	60.0	43.5	39.9	22.6	16.8	11.5
1.75 V	104	92.0	58.0	42.5	39.1	21.8	16.0	11.3
1.80 V	97.7	89.0	56.0	41.5	38.3	21.0	15.2	11.0

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.