

# AccuForce 12V - 40Ah | VRLA Battery



## Specifications

Nominal Voltage	12 V	
Number of cells	6	
Design Life	5 years	
Dimensions	Length	197.5 mm
	Width	165.5 mm
	Height	170.0 mm
	Total Height	170.0 mm
Approx. Weight	12.8 kg	
Nominal Capacity (25°C)	20 hours rate (2.10 A, 10.8 V)	42.00 Ah
	10 hours rate (4.00 A, 10.8 V)	40.00 Ah
	5 hours rate (7.51 A, 10.5 V)	37.55 Ah
	1 hour rate (25.9 A, 9.6 V)	25.90 Ah
Max. Discharge Current (25°C)	400 A (5s)	
Internal Resistance	8.5 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
Short Circuit Current	950 A	
Charge Methods:	Cycle use	2.30-2.35 Vpc
	Maximum charging current	16 A
	Temperature compensation	-30 mV/°C
	Constant Voltage Charge (25°C)	Standby use
	Temperature compensation	-20 mV/°C

## Applications

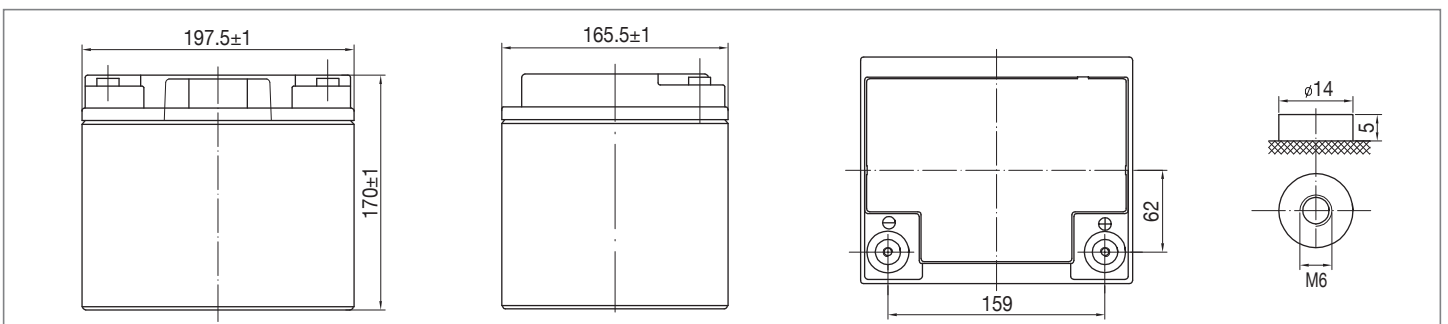
- Uninterruptible Power Supplies (UPS)
- Electric Power Systems (EPS)
- Emergency backup power supplies
- Electronic apparatus and equipment
- Communication power supplies
- DC power supplies
- Auto control system



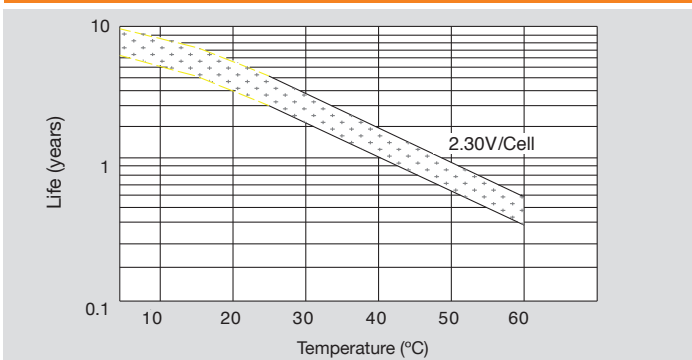
## Battery Construction

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

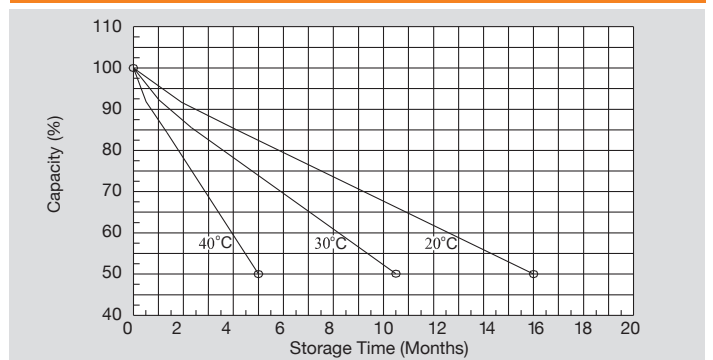
## Dimensions



## Temperature Effects on Float Life

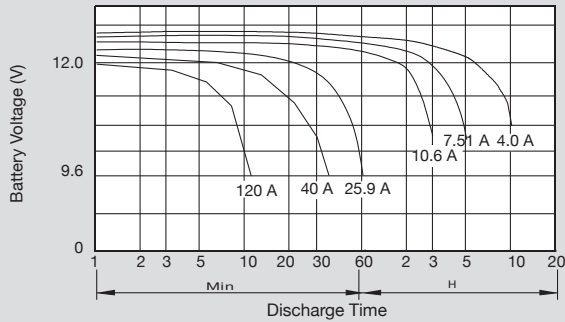


## Self Discharge Characteristics

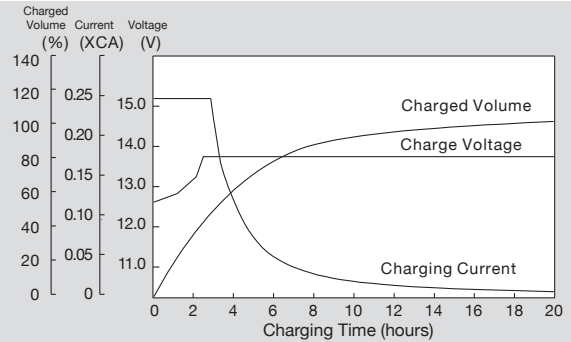


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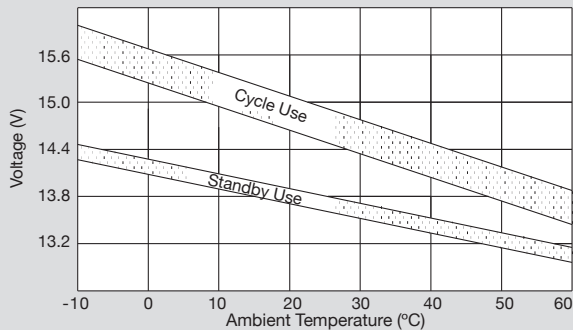
## Discharge Characteristics (25°C)



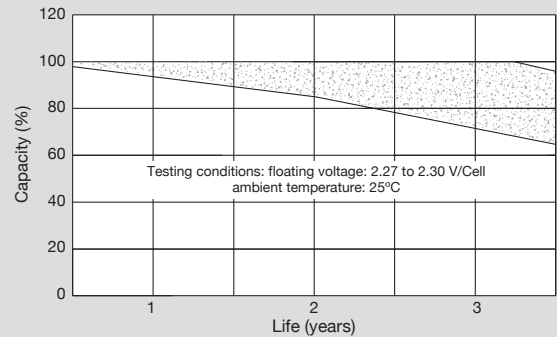
## Constant Voltage Charging Characteristic (0.25 CA, 25°C)



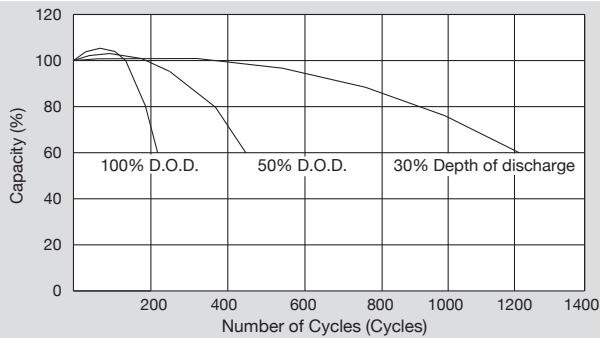
## Relationship Between Charging Voltage and Temperature



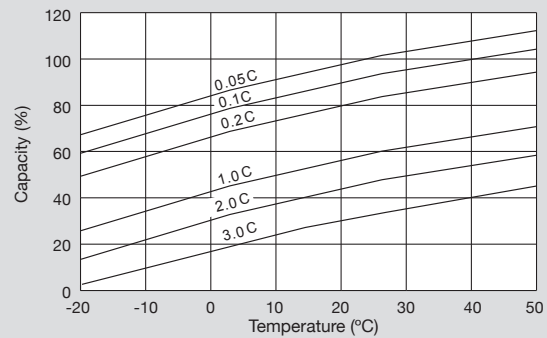
## Life Characteristics of Standby Use



## Cycle Service Life in Relation to Depth of Discharge



## Temperature Effects on Capacity



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

End Voltage (Volts/Cell)	5 min	10 min	15 min	30 min	1 h	3 h	5 h	10 h	20 h
1.60 V	130	90.5	72.7	41.9	25.9	11.3	7.95	4.20	2.25
1.65 V	122	86.2	69.1	40.6	25.4	11.1	7.81	4.15	2.22
1.70 V	114	81.8	66.5	39.2	24.8	10.9	7.67	4.10	2.18
1.75 V	106	77.6	63.0	37.7	24.2	10.6	7.51	4.05	2.14
1.80 V	97	73.9	59.2	36.2	23.5	10.4	7.35	4.00	2.10

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

End Voltage (Volts/Cell)	5 min	10 min	15 min	30 min	45 min	1 h	2 h	3 h	5 h
1.60 V	236	163	127	83.2	62.2	50.9	28.0	21.5	14.0
1.65 V	220	157	124	81.8	61.0	50.2	27.6	21.2	13.8
1.70 V	204	150	121	79.3	59.8	49.3	27.1	20.8	13.6
1.75 V	186	143	117	76.8	58.6	48.5	26.7	20.5	13.4
1.80 V	177	135	113	74.3	57.4	47.7	26.3	20.1	13.3

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