

# AccuForce 12V - 40Ah | 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

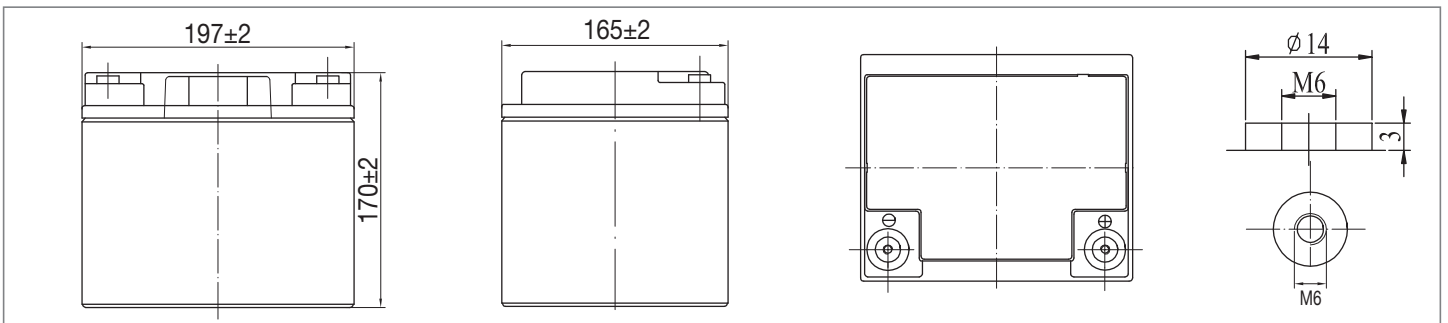
## Specifications

Nominal Voltage	12 V	
Number of cells	6	
Design Life	10 years	
Dimensions	Length	197 mm
	Width	165 mm
	Height	170 mm
	Total Height	170 mm
Approx. Weight	12.8 kg	
Nominal Capacity (25°C)	20 hours rate (2.10 A, 10.8 V)	42.0 Ah
	10 hours rate (4.00 A, 10.8 V)	40.0 Ah
	5 hours rate (7.00 A, 10.5 V)	35.0 Ah
	1 hour rate (24.80 A, 9.6 V)	24.8 Ah
Max. Discharge Current (25°C)	400 A (5s)	
Internal Resistance	8.5 mOhms	
Fully Charged battery (25°C)	3% of capacity declined per month at 20°C (average)	
Self-Discharge	Discharge : -15°C~50°C	
Operating Temperature Range	Charge	-10°C~50°C
	Storage	-20°C~50°C
	Short Circuit Current	1050 A
Charging Characteristics (25°C)	Boost charging voltage	2.40-2.45 Vpc
	Maximum charging current	12 A
	Temperature compensation	-30 mV/°C
	Float charging voltage	2.23-2.27 Vpc
	Temperature compensation	-18 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	Sulfuric acid

## Dimensions



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

End Voltage (Volts/Cell)	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60 V	84.0	66.0	40.0	24.8	14.6	10.2	8.36	7.14	4.90	4.07	2.14
1.65 V	81.5	64.4	39.2	24.4	14.5	10.1	8.31	7.10	4.87	4.06	2.13
1.70 V	78.1	62.0	38.0	23.8	14.4	10.1	8.26	7.05	4.83	4.05	2.13
1.75 V	74.8	59.9	37.1	23.3	14.2	10.0	8.20	7.00	4.80	4.03	2.11
1.80 V	70.6	56.8	35.7	22.6	13.8	9.70	7.95	6.79	4.66	4.00	2.10

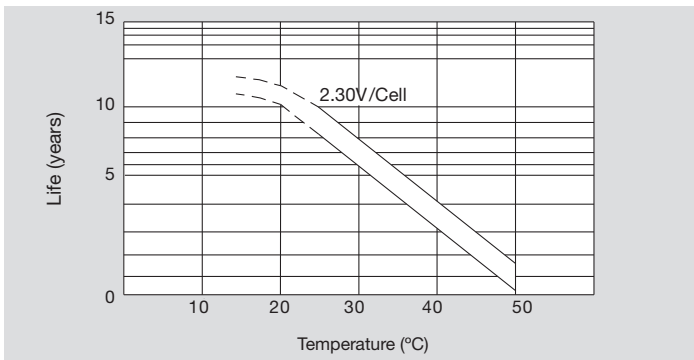
## Constant Power Discharge (Watts) at 25°C

End Voltage (Volts/Cell)	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60 V	907	725	449	283	169	120	98.4	84.4	58.2	48.6	25.7
1.65 V	880	707	440	278	168	119	97.8	83.9	57.8	48.5	25.6
1.70 V	844	681	426	271	167	118	97.1	83.3	57.4	48.4	25.5
1.75 V	807	658	416	266	164	118	96.4	82.7	57.0	48.1	25.4
1.80 V	762	623	401	258	160	114	93.5	80.3	55.3	47.8	25.2

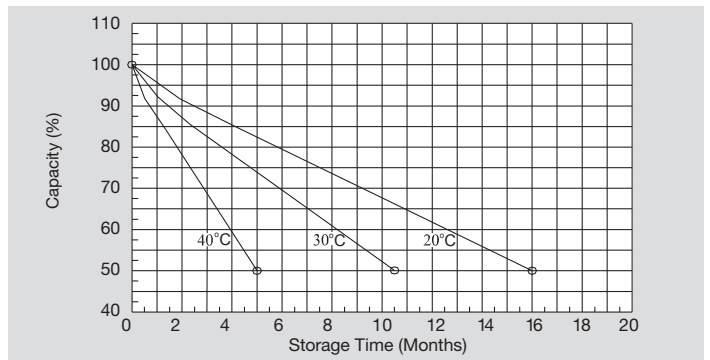
(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

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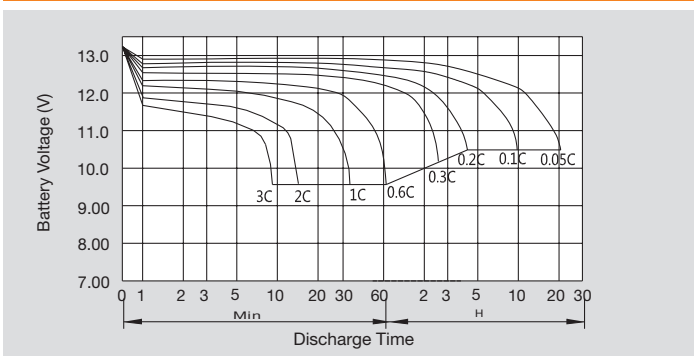
### Temperature Effects on Float Life



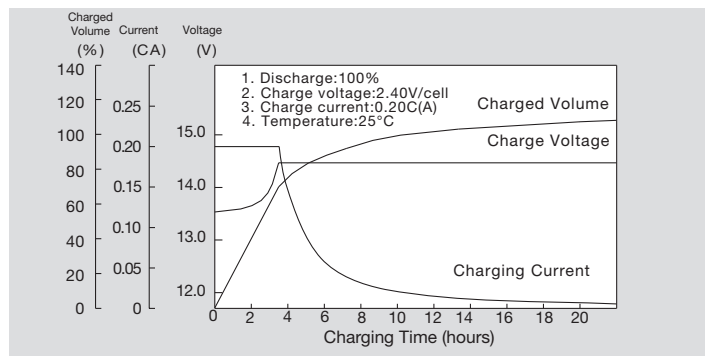
### Self Discharge Characteristics



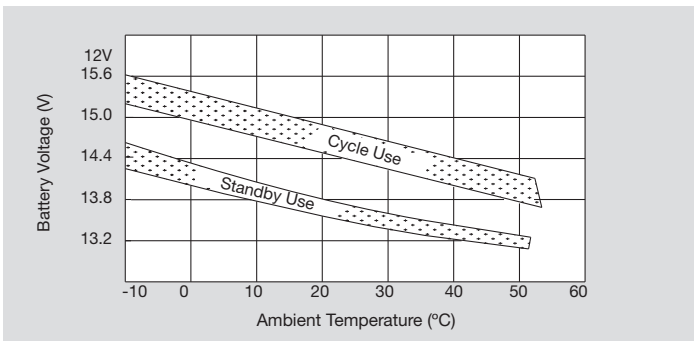
### Discharge Characteristics (25°C)



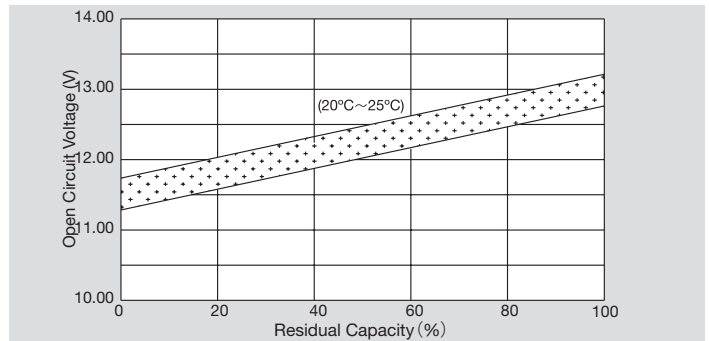
### Charging Characteristics (25°C)



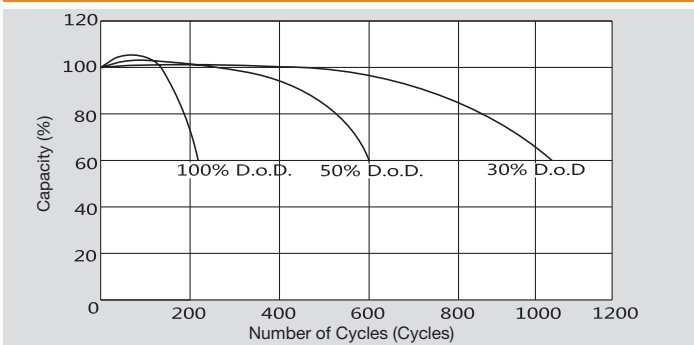
### Relationship Between Charging Voltage and Temperature



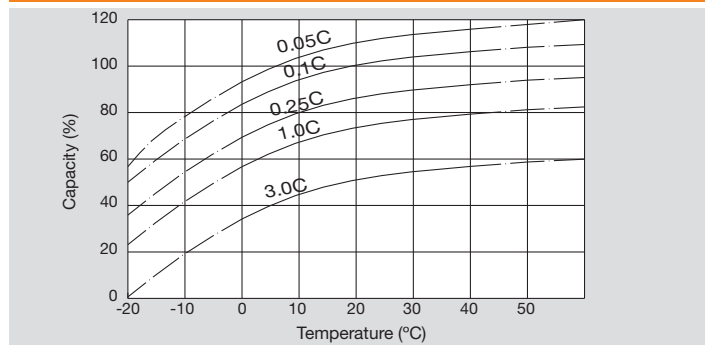
### Relationship Between OCV and Residual Capacity (25°C)



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



### Temperature Effects on Capacity



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