

# AccuForce 12V - 200Ah S

## Solar VRLA Battery



### Specifications

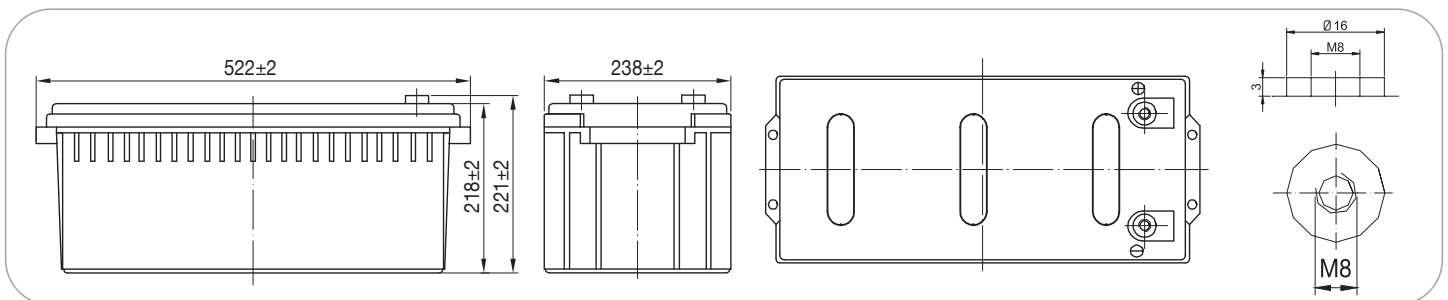
Nominal Voltage	12 V	
Number of cells	6	
Cycle Life	Approx. 800 cycles at 50% DOD	
Dimensions	Length	522 mm
	Width	238 mm
	Height	218 mm
	Total Height	221 mm
Approx. Weight	60.5 kg	
Nominal Capacity (25°C)	120 hours rate (1.85 A, 11.1 V)	222 Ah
	100 hours rate (2.21 A, 11.1 V)	221 Ah
	48 hours rate (4.48 A, 10.8 V)	215 Ah
	10 hours rate (19.9 A, 10.8 V)	199 Ah
	5 hours rate (34.7 A, 10.5 V)	174 Ah
Max. Discharge Current (25°C)	2000 A (5s)	
Internal Resistance	3.0 mOhms	
Fully Charged battery (25°C)		
Self-Discharge	3% of capacity declined per month at 25°C (average)	
Operating Temperature Range	Discharge	-15°C~50°C
	Charge	-10°C~50°C
	Storage	-20°C~50°C
Short Circuit Current	5420 A	
Charge Methods: Constant Voltage Charge (25°C)	Cycle use	2.40-2.48 Vpc
	Maximum charging current	60 A
	Temperature compensation	-30 mV/°C
	Standby use	2.27-2.35 Vpc
	Temperature compensation	-18 mV/°C

### Applications

- Solar / Wind power systems
- Residential installations
- Golf carts and electric powered vehicles
- Marine equipment
- Electric wheelchairs
- Traffic systems (signaling and lighting)
- Remote monitoring and controlling
- Power tools and cleaning machines
- Uninterruptible power supply (UPS)

### 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



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

End Voltage (Volts/Cell)	10min	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h	48h	72h	100h	120h
1.60 V	382	320	194	122	71.6	50.0	41.4	35.3	30.9	24.4	20.3	10.6	---	---	---	---
1.65 V	371	312	190	120	71.1	49.7	41.2	35.1	30.7	24.2	20.2	10.6	---	---	---	---
1.70 V	355	301	184	117	70.6	49.4	40.9	34.8	30.5	24.1	20.2	10.5	---	---	---	---
1.75 V	340	291	179	115	69.5	49.0	40.6	34.7	30.3	23.9	20.0	10.5	4.50	3.04	---	---
1.80 V	321	275	174	111	67.7	47.5	39.4	33.7	29.4	23.2	19.9	10.4	4.48	3.02	---	---
1.85 V	300	257	163	104	63.5	44.6	37.0	31.6	27.5	21.8	18.9	9.78	4.21	2.84	2.21	1.85

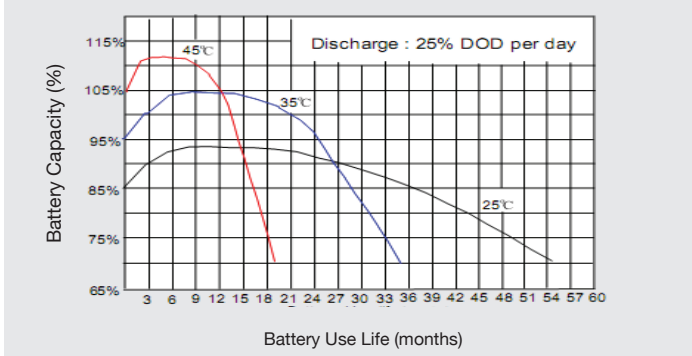
### Constant Power Discharge (Watts) at 25°C

End Voltage (Volts/Cell)	10min	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h	48h	72h	100h	120h
1.60 V	4125	3514	2177	1386	829	588	487	418	365	290	242	127	---	---	---	---
1.65 V	4001	3430	2133	1364	824	584	484	415	363	288	242	127	---	---	---	---
1.70 V	3836	3304	2068	1330	817	580	481	413	360	286	241	127	---	---	---	---
1.75 V	3671	3191	2018	1303	805	576	477	410	358	284	239	126	54.6	36.6	---	---
1.80 V	3466	3023	1944	1263	784	559	463	397	347	276	238	125	54.3	36.3	---	---
1.85 V	3186	2840	1826	1186	735	525	435	373	326	258	224	117	51.0	34.1	26.7	22.4

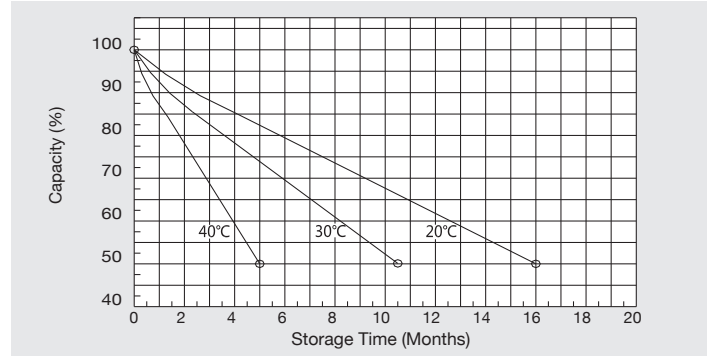
(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

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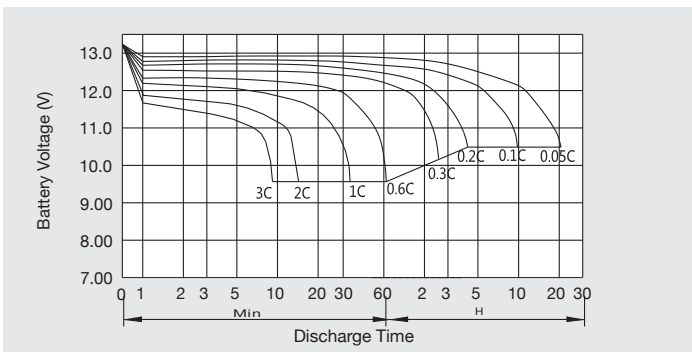
## Typical Use Life and Operating Temperature



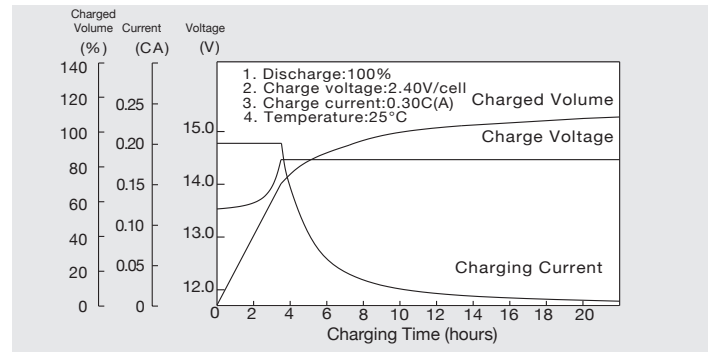
## Self Discharge Characteristics



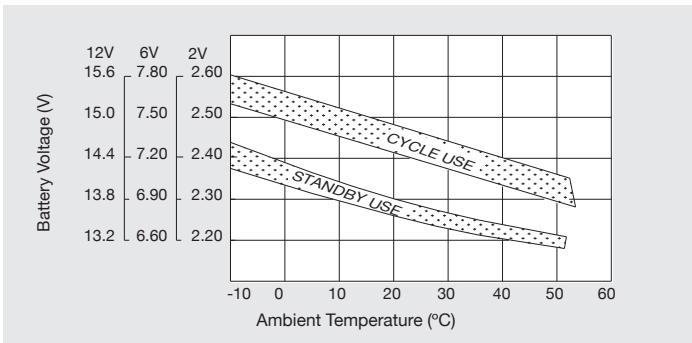
## Discharge Characteristics (25°C)



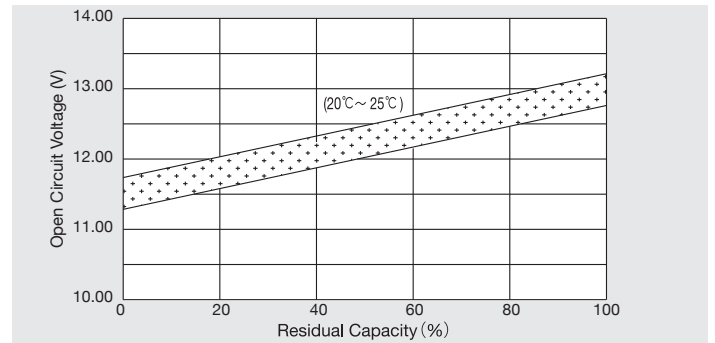
## Constant Voltage Charging Characteristic (0.25 CA, 25°C)



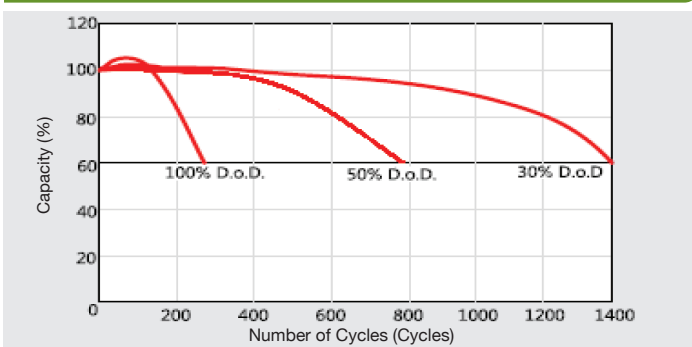
## Relationship Between Charging Voltage and Temperature



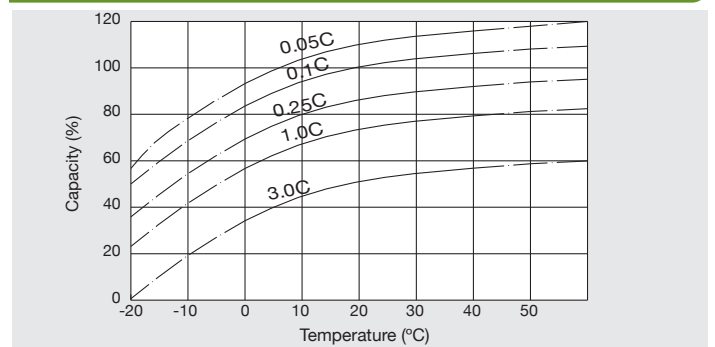
## Relationship Between OCV and Residual Capacity (25°C)



## Cycle Service Life in Relation to Depth of Discharge



## Temperature Effects on Capacity



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