

# AccuForce 12V - 80Ah S

## Solar VRLA Battery



### Specifications

Nominal Voltage	12 V	
Number of cells	6	
Cycle Life	Approx. 800 cycles at 50% DOD	
Dimensions	Length	260 mm
	Width	168 mm
	Height	211 mm
	Total Height	214 mm
Approx. Weight	22 kg	
Nominal Capacity (25°C)	120 hours rate (0.68 A, 11.1 V)	81.6 Ah
	100 hours rate (0.81 A, 11.1 V)	81.0 Ah
	48 hours rate (1.71 A, 10.8 V)	82.1 Ah
	10 hours rate (7.50 A, 10.8 V)	75.0 Ah
	5 hours rate (13.2 A, 10.5 V)	66.0 Ah
Max. Discharge Current (25°C)	750 A (5s)	
Internal Resistance	6 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	2000 A	
Charging Characteristics (25°C)	Cycle use	2.40-2.48 Vpc
	Maximum charging current	22.5 A
	Temperature compensation	-30 mV/°C
	Standby use	2.27-2.35 Vpc
Temperature compensation	-18 mV/°C	
Design Floating Life (20°C)	10 years	

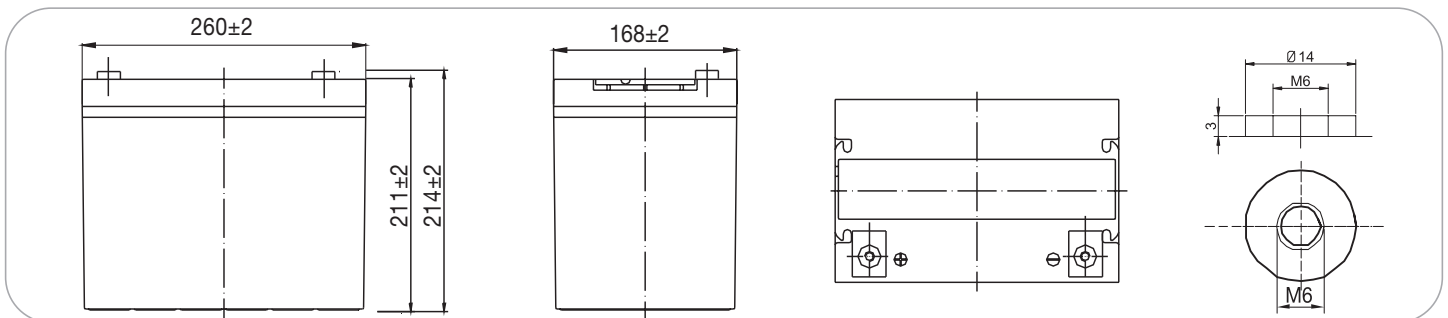
### Applications

- 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

### Dimensions



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

End Voltage (Volts/Cell)	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h	48h	72h	100h	120h
1.60 V	125	75.8	46.9	27.4	19.2	15.6	13.4	11.7	9.15	7.65	3.99	----	----	----	----
1.65 V	122	74.3	46.3	27.2	19.1	15.6	13.3	11.5	9.15	7.65	3.00	----	----	----	----
1.70 V	118	72.0	45.1	27.0	18.9	15.4	13.2	11.5	9.08	7.58	3.97	1.72	----	----	----
1.75 V	114	70.2	44.1	26.7	18.8	15.4	13.2	11.4	9.00	7.58	3.95	1.71	1.16	----	----
1.80 V	107	67.6	42.9	25.9	18.2	14.9	12.8	11.0	8.70	7.50	3.95	1.71	1.16	----	----
1.85 V	101	63.9	40.5	24.5	17.2	14.1	12.1	10.4	8.20	7.10	3.70	1.62	1.10	0.81	0.68

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

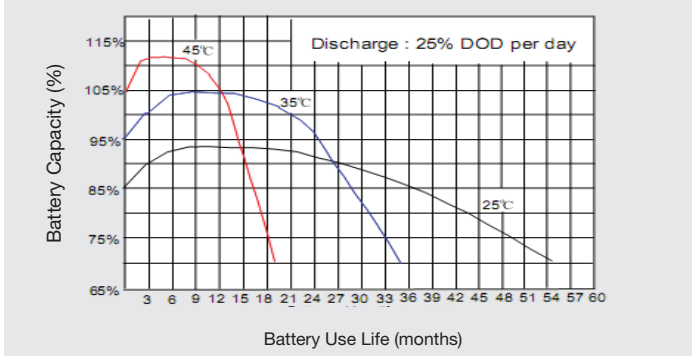
End Voltage (Volts/Cell)	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h	48h	72h	100h	120h
1.60 V	1373	842	534	315	223	182	158	136	109	90.8	48.0	----	----	----	----
1.65 V	1339	828	526	314	222	181	156	135	109	90.8	47.9	----	----	----	----
1.70 V	1290	804	514	312	221	180	155	135	108	90.0	47.9	20.8	----	----	----
1.75 V	1246	786	504	308	219	179	154	134	107	90.0	47.7	20.7	14.1	----	----
1.80 V	1181	759	489	300	213	176	151	131	104	89.3	47.3	20.5	13.9	----	----
1.85 V	1120	720	464	284	202	167	143	124	98.6	84.7	44.8	19.4	13.2	9.57	8.11

Note: The above characteristics data can be obtained within three charge/discharge cycles.

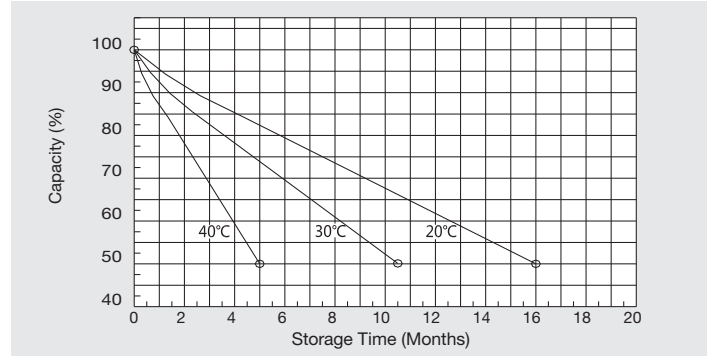
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## Solar VRLA Battery

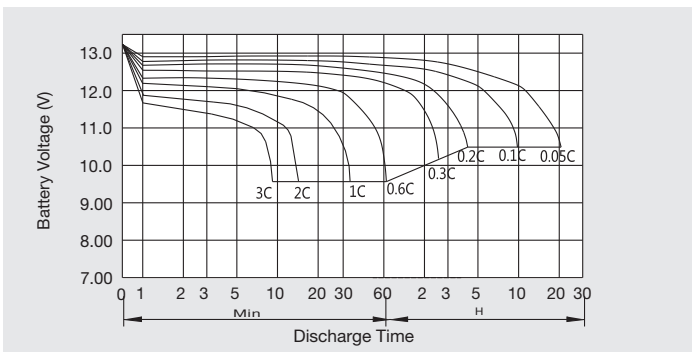
### Typical Use Life and Operating Temperature



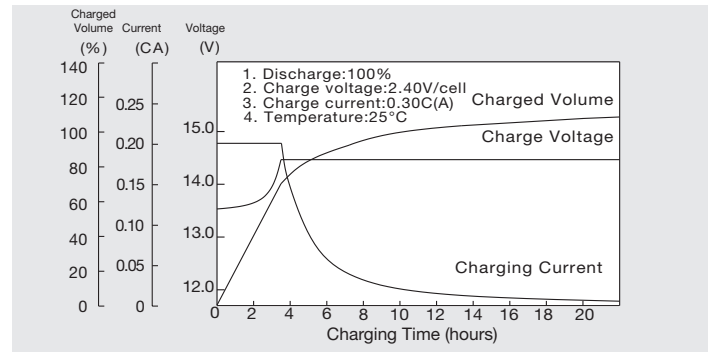
### Self Discharge Characteristics



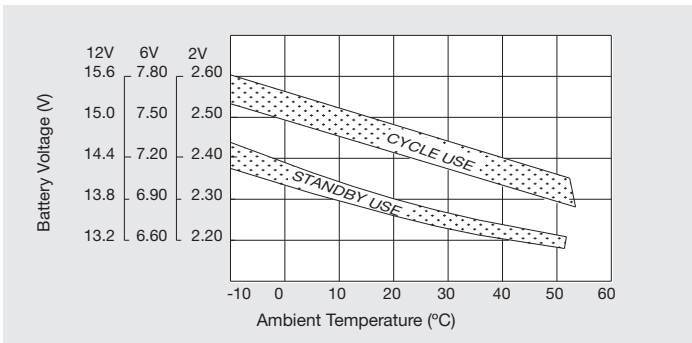
### Discharge Characteristics (25°C)



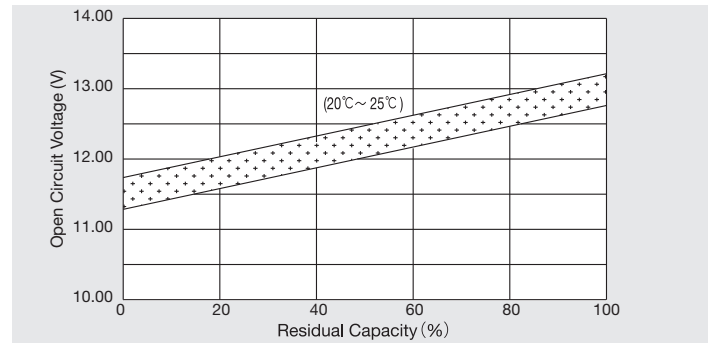
### Charging Characteristics (25°C)



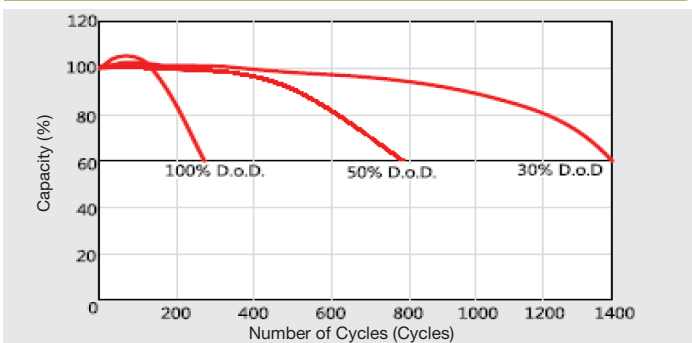
### Relationship Between Charging Voltage and Temperature



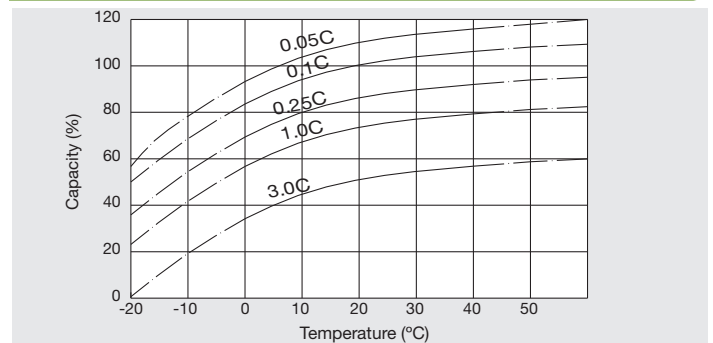
### Relationship Between OCV and Residual Capacity (25°C)



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



### Temperature Effects on Capacity



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