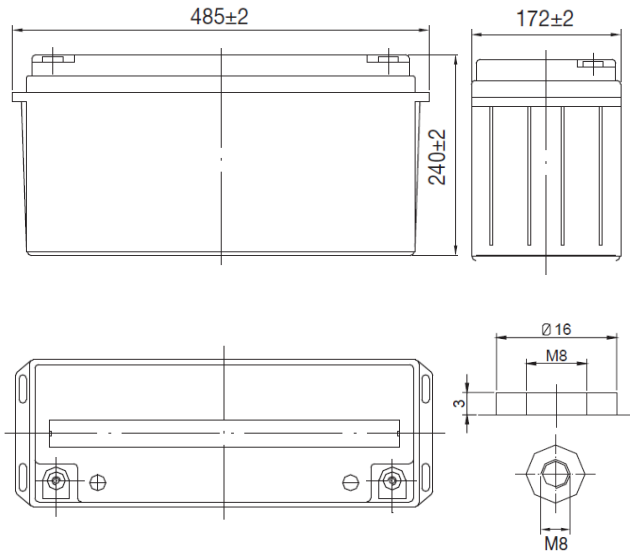
AccuForce S

AccuForce 12V - 175Ah S

AGM VRLA Battery

APPLICATIONS

- Solar / Wind power systems
- Residential installations
- Marine equipment
- Traffic systems (signaling and lighting)
- Remote monitoring and controlling
- Power tools and cleaning machines
- Uninterruptible power supply (UPS)



SPECIFICATIONS

Nominal Voltage		12 V
Number of cells		6
Cycle life		Approx. 800 cycles at 50% DOD
Dimensions	Length	485 mm
	Width	172 mm
	Height	240 mm
	Total Height	240 mm
Weight		42.8 kg
Nominal Capacity (25°C)	120 hours rate (1.85)	176.4 Ah
	100 hours rate (1.85)	174.0 Ah
	48 hours rate (1.80)	165.6 Ah
	10 hours rate (1.80)	150.0 Ah
	5 hours rate (1.75)	131.5 Ah
Internal Resistance (fully charged, 25°C)		3.50 mOhm
Self Discharge		approx. 3% per month at 25°C
Nominal Operating Temperature		25°C
Operating Temperature range	Discharge	-15°C to 50°C
	Charge	-10°C to 50°C
	Storage	-20°C to 50°C
Float Charging Voltage		2.27 to 2.35 V/cell at 25°C
Temperature compensation		-18mV/°C
Cyclic Charging Voltage		2.40 to 2.48 V/cell at 25°C
Temperature compensation		-30mV/°C
Maximum charging current		45.0 A
Maximum discharge current (25°C)		1500 A (5 sec.)
Short Circuit Current (25°C)		3400 A

Battery Construction

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

PERFORMANCE DATA

Discharge Constant Current at 25°C (Amperes)

End Voltage (V/cell)	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h	48h	72h	100h	120h
1.60V	251	152	93.8	54.8	38.3	31.3	26.8	23.3	18.3	15.3	8.01	---	---	---	---
1.65V	244	149	92.6	54.4	38.1	31.1	26.6	22.9	18.3	15.3	7.99	---	---	---	---
1.70V	236	144	90.2	54.0	37.9	30.9	26.4	22.9	18.2	15.2	7.99	3.51	---	---	---
1.75V	227	140	88.3	53.3	37.5	30.8	26.3	22.9	18.0	15.2	7.93	3.28	2.34	---	---
1.80V	214	135	85.7	51.9	36.4	29.8	25.5	22.1	17.4	15.0	7.88	3.45	2.33	---	---
1.85V	201	128	80.4	48.8	34.1	27.9	24.0	20.8	16.4	14.1	7.41	3.24	2.19	1.74	1.47

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

End Voltage (V/cell)	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h	48h	72h	100h	120h
1.60V	2745	1684	1067	630	446	364	315	274	218	182	96.0	---	---	---	---
1.65V	2679	1656	1054	626	444	364	311	270	218	182	95.8	---	---	---	---
1.70V	2580	1609	1029	623	441	360	311	270	216	180	95.6	42.0	---	---	---
1.75V	2492	1571	1009	615	439	358	308	266	214	180	95.3	41.8	28.1	---	---
1.80V	2361	1519	979	600	426	351	302	261	206	179	94.5	41.4	27.9	---	---
1.85V	2216	1425	919	563	399	328	283	244	193	168	88.9	39.0	26.3	21.0	17.6

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

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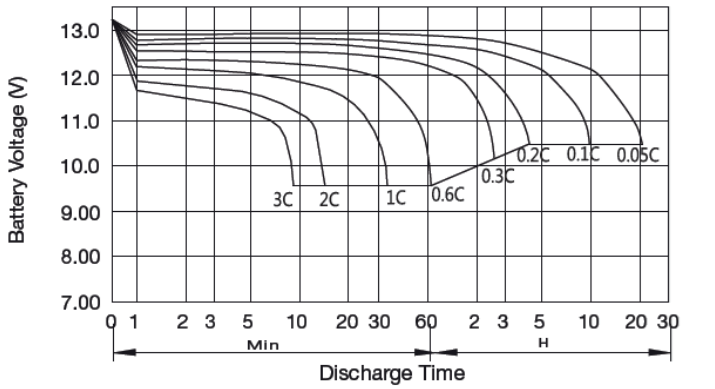
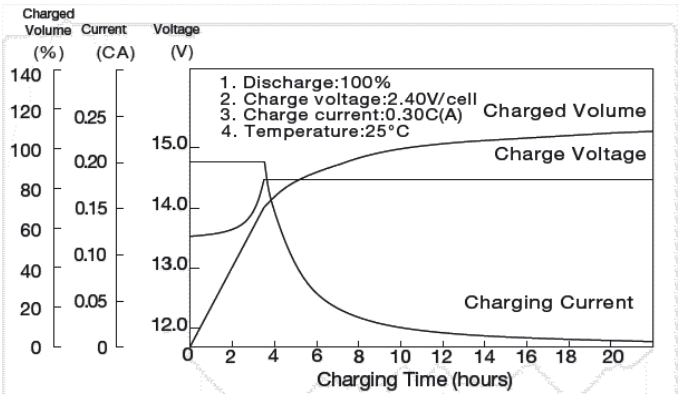
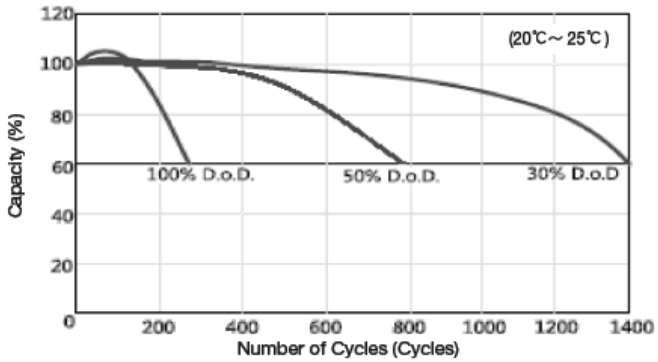
Discharge Characteristics (25°C)



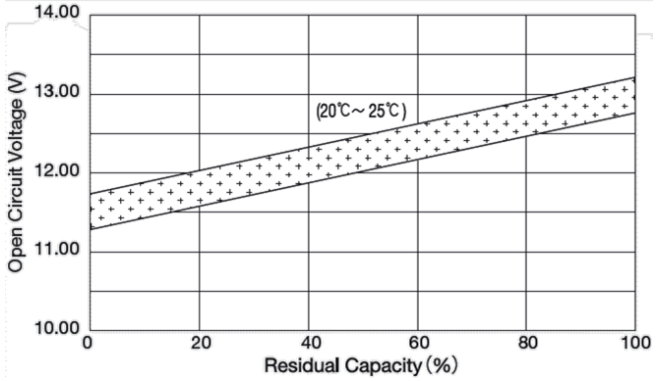
Charging Characteristics (25°C)



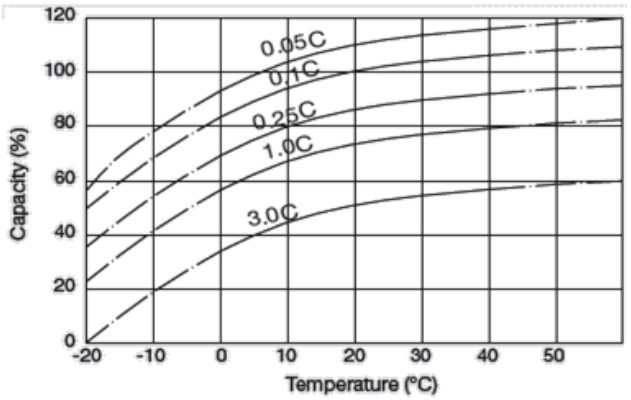
Cycle Service Life in Relation to Depth of Discharge



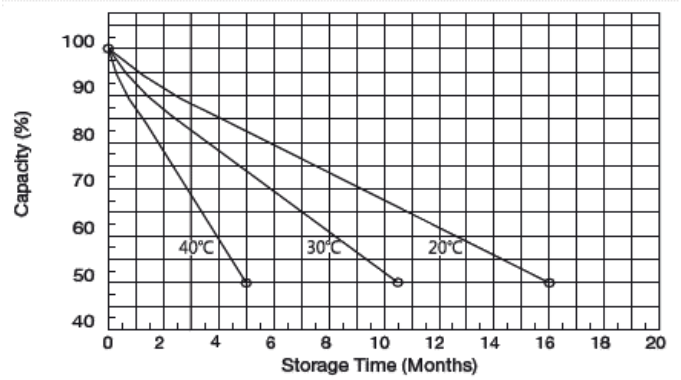
Relationship Between OCV and Residual Capacity (25°C)



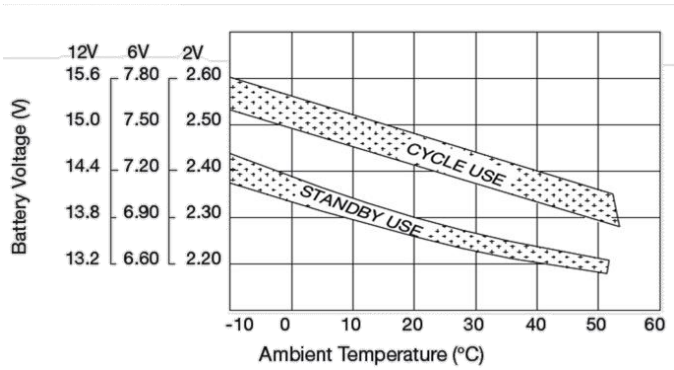
Temperature Effects on Capacity



Self Discharge characteristics



Relationship Between Charging Voltage and Temperature



Typical Use life and Operating Temperature

