

**Cod. 00412221**

**VRLA BATTERY AGM TECHNOLOGY**

Revision 4.0

**Specifications**

**Nominal Voltage (V)** 12V

**Nominal Capacity**

20 hour rate	(1.1A to 10.50V)	<b>22Ah</b>
10 hour rate	(2.09A to 10.50V)	<b>20.9Ah</b>
5 hour rate	(3.74A to 10.20V)	<b>18.7Ah</b>
1 C	(22A to 9.60V)	<b>13.93Ah</b>
3 C	(66A to 9.60V)	<b>8.8Ah</b>

**Weight** Approx. 6.7kg (14.74 Lbs.)

**Internal Resistance (at 1KHz)** Approx. 8 mΩ

**Maximum Discharge Current for**

**5 seconds:** 330A

**Charging Methods at 25°C (77°F)**

**Cycle use:**

Charging Voltage **14.4 to 15.0V**  
Coefficient -5.0mv/°C/cell  
Maximum Charging Current: **6.6A**

**Standby use:**

Float Charging Voltage **13.50 to 13.80V**  
Coefficient -3.0mv/°C/cell

**Operating Temperature Range**

Charge **-15°C (5°F) to 40 °C (104°F)**  
Discharge **-15°C (5°F) to 50 °C (122°F)**  
Storage **-15°C (5°F) to 40 °C (104°F)**

**Charge Retention (shelf life) at 20°C (68°F)**

1 month	<b>92%</b>
3 month	<b>90%</b>
6 month	<b>80%</b>

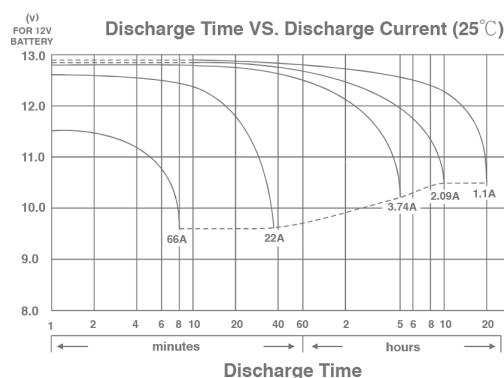
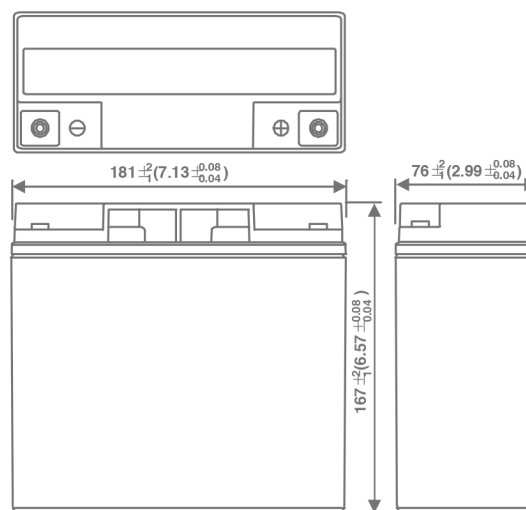
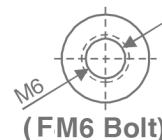
**Case Material ABS UL94HB**

(Option: ABS UL94 V-0 flame retardant)

**Terminal** FM6

**ENERGY SAFE**

**Dimensions mm (inch)**

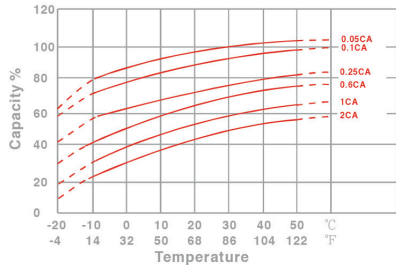


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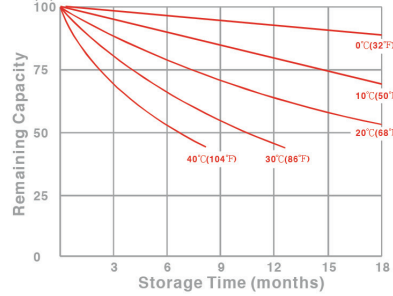
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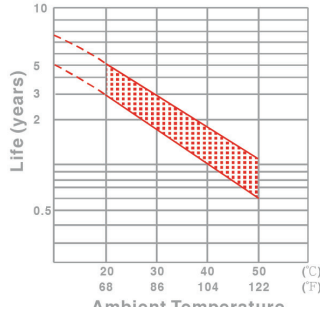
Effect of Temperature on Capacity 25°C(77°F)



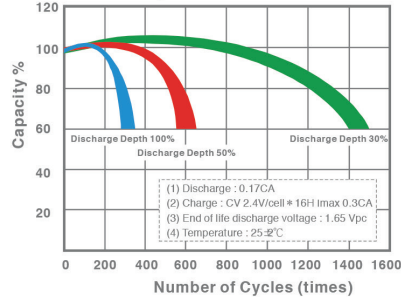
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



PERFORMANCE DATA

Discharge Rates in Watts to Various End Voltages at 25°C (77°F)

Time	End Voltage	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
5	min	912	1017	1086	1129	1140	1153	1165
10	min	585	653	697	724	731	740	748
15	min	435	481	511	529	534	539	545
30	min	231	256	271	281	284	287	290
60	min	152	155	157	158	159	160	161
120	min	78.5	80.6	81.9	83.0	83.4	83.9	84.6
180	min	63.2	64.7	65.6	66.4	66.7	67.0	67.5
240	min	50.7	51.8	52.6	53.2	53.5	53.8	54.2
300	min	43.7	44.5	45.1	45.4	45.6	45.8	46.1
600	min	25.8	26.4	26.7	26.8	26.9	27.0	27.2
1200	min	13.1	13.5	13.8	14.0	14.1	14.2	14.3

Discharge Rates in Amperes to Various End Voltages at 25°C (77°F)

Time	End Voltage	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
5	min	74.1	82.5	89.2	96.6	98.3	101	104
10	min	50.9	56.8	60.1	62.6	63.5	64.2	65.0
15	min	37.0	41.8	43.7	45.0	45.4	45.8	46.3
30	min	19.4	21.5	22.8	23.5	23.7	24.0	24.3
60	min	12.1	12.5	12.8	13.0	13.1	13.2	13.4
120	min	6.43	6.67	6.80	6.91	6.95	6.99	7.05
180	min	5.36	5.43	5.48	5.52	5.54	5.56	5.60
240	min	4.29	4.34	4.38	4.41	4.43	4.45	4.48
300	min	3.67	3.72	3.74	3.76	3.77	3.79	3.81
600	min	2.14	2.17	2.19	2.21	2.22	2.23	2.24
1200	min	1.11	1.13	1.14	1.15	1.16	1.17	1.18

All data on the spec. sheet is an average value:

The tolerance range : X<6min (+15%~-15%), 6min≤X<10min (+12%~-12%), 10min≤X<60min (+8%~-8%), X≥60min (+5%~-5%)