

12SB220CL-FR 12Volt 220Ah

Specifications

Nominal Voltage(V) 12V

Nominal Capacity

20 hour rate	(11.0A	to	9.9V)	220.0Ah
10 hour rate	(20.8A	to	9.9V)	208.0Ah
5 hour rate	(39.2A	to	9.6V)	196.0Ah
1 hour rate	(162A	to	9.6V)	162.0Ah

Weight Approx. 68.5kg (151Lbs.)

Internal Resistance (at 1KHz) Approx. 4.2 m Ω

Maximum Discharge Current for

5 seconds: 800A

Charging Methods at 25°C (77°F)

Cycle use:

Charging Voltage 14.4 to 15.0V

Coefficient $-5.0\text{mv}/\text{cell}$

Maximum Charging Current : 60A

Standby use:

Float Charging Voltage 13.50 to 13.80 V

Coefficient $-3.3\text{mv}/\text{cell}$

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 98%

3 month 94%

6 month 85%

Case Material ABS

(UL94-V0 flame retardant case / cover)

Terminal F18

Description of torque value of hard ware for the terminals:

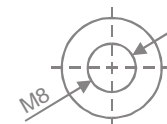
Recommended torque value **M8: 7.35 N-m (75kg-cm)**

Maximum allowable torque value **M8: 9.8 N-m (100kg-cm)**

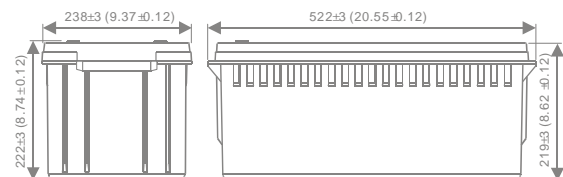
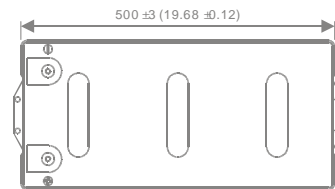


Dimensions

mm(inch)

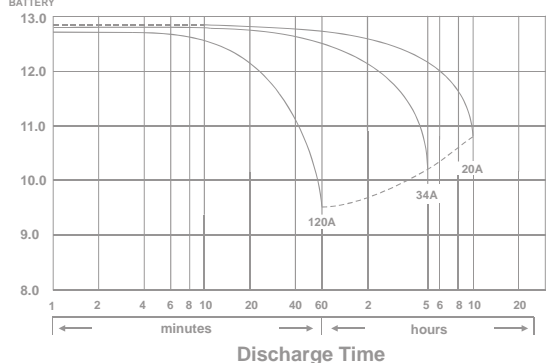


(M8 Bolt)
F18

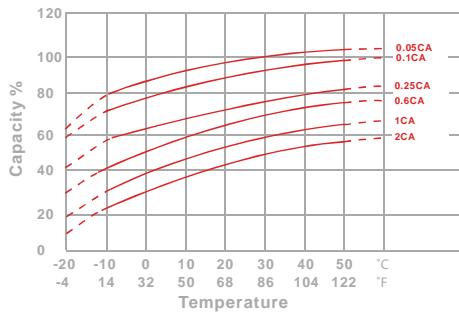


(v)
FOR 12V
BATTERY

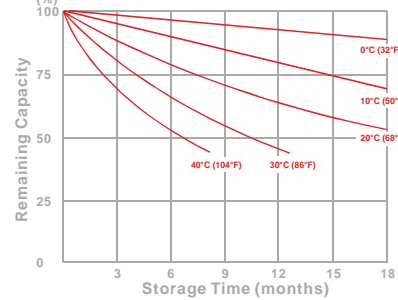
Discharge Time VS. Discharge Current (25 °C)



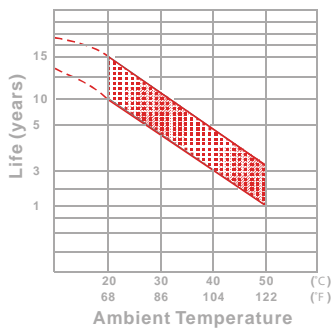
Effect of Temperature on Capacity 25°C (77°F)



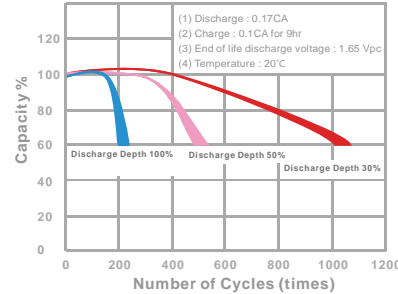
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



- PERFORMANCE DATA

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

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
10	min	3845	4238	4487	4714	4825	4948	5147
15	min	3209	3418	3610	3794	3871	3962	4119
30	min	2194	2331	2459	2576	2624	2686	2781
60	min	1322	1392	1451	1505	1523	1546	1583
120	min	689	752	793	827	842	859	881
180	min	552	591	621	648	655	663	674
240	min	483	511	532	546	551	557	565
300	min	423	446	458	465	468	472	477
600	min	226	237	244	248	250	252	255
1200	min	122	128	131	133	134	135	136

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

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
10	min	339	387	427	458	469	484	507
15	min	292	334	361	385	394	405	419
30	min	210	229	244	258	262	268	276
60	min	128	134	143	150	153	157	162
120	min	66.7	72.0	75.9	79.1	80.2	81.6	83.5
180	min	48.7	52.3	54.7	57.0	57.8	58.7	60.4
240	min	37.9	41.1	43.2	44.9	45.5	46.2	47.6
300	min	31.7	34.1	35.9	37.1	37.6	38.2	39.2
600	min	19.8	20.2	20.4	20.6	20.7	20.8	20.9
1200	min	10.2	10.5	10.7	10.8	10.9	11.0	11.1

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

The tolerance range : $X < 6\text{min}(+15\% \sim -15\%)$, $6\text{min} \leq X < 10\text{min}(+12\% \sim -12\%)$, $10\text{min} \leq X < 60\text{min}(+8\% \sim -8\%)$, $X \geq 60\text{min}(+5\% \sim -5\%)$