

### 12SB50C (12V 50Ah)

#### SPECIFICATIONS

Nominal Voltage (V) 12V

#### Nominal Capacity

20 hour rate (2.50A to 10.50V)	50Ah
10 hour rate (4.75A to 10.50V)	47.5Ah
5 hour rate (8.50A to 10.20V)	42.5Ah
1C (50A to 9.60V)	31.67Ah
3C (150A to 9.60V)	20Ah

Weight Approx. 14.3kg (31.46lbs)

Internal Resistance (@1kHz) Approx. 5mΩ

#### Maximum Discharge Current

For 5 seconds 600A

#### Charging Methods @25°C (77°F)

##### Cycle Use:

Charging Voltage 14.4V to 15.0V

Coefficient -5.0mV/°C/Cell

Maximum Charging Current 15A

##### Standby Use:

Float Charging Voltage 13.50V 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) @20°C (68°F)

1 month 98%

3 months 94%

6 months 85%

Case Material ABS

Terminal F8

#### Description of Torque Value of Hard Ware for the Terminals

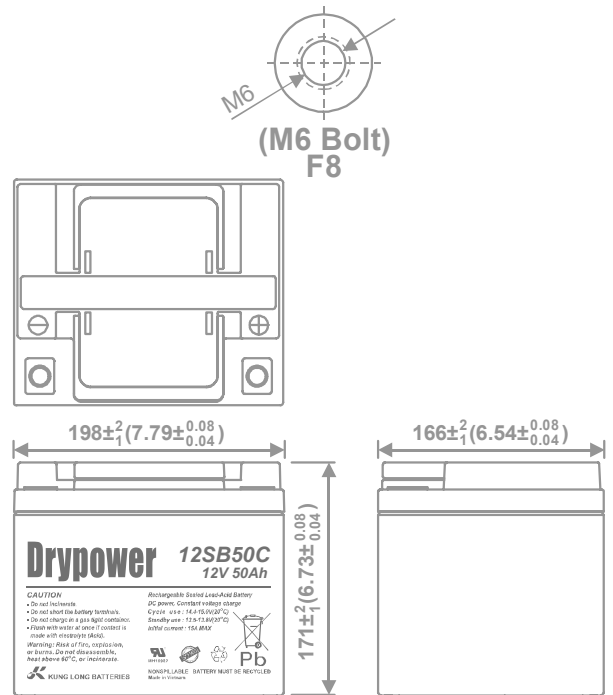
Recommended Torque Value M6: 5.39 N-m (55kg-cm)

Max. Allowable Torque Value M6: 8.82 N-m (90kg-cm)

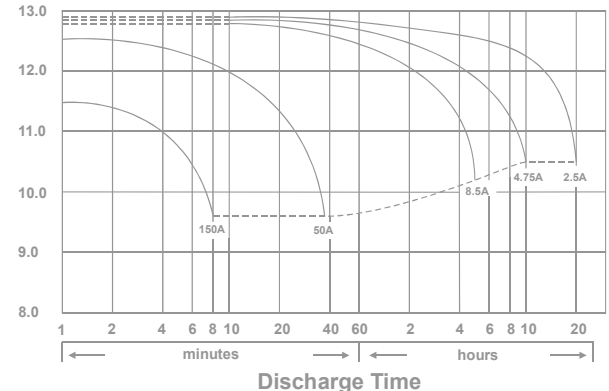


#### DIMENSIONS

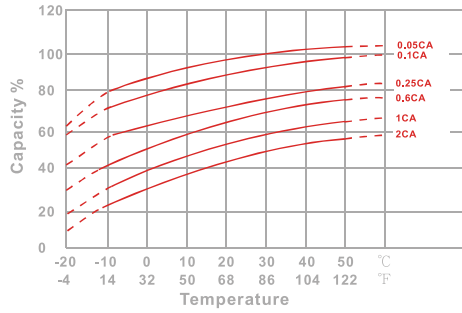
mm (inch)



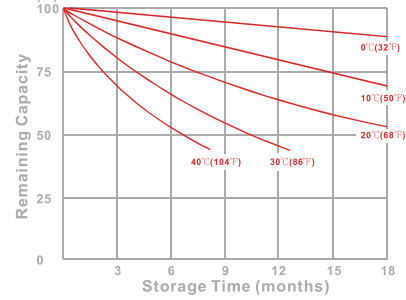
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



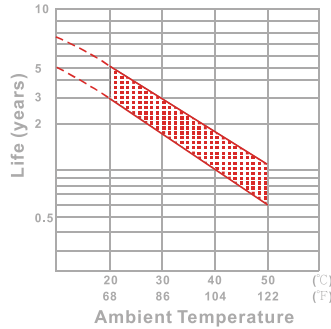
**Effect of Temperature on Capacity 25°C(77°F)**



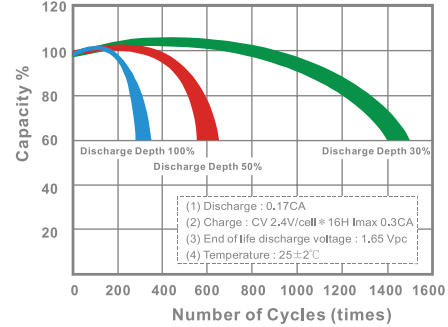
**Capacity Retention Characteristic**



**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
Time	min	1410	1693	1895	2031	2060	2090	2124
5	min	1005	1194	1309	1370	1395	1419	1445
10	min	742	858	940	981	997	1013	1027
15	min	459	528	571	590	597	605	613
30	min	316	332	342	350	353	357	360
60	min	175	192	200	207	209	212	215
120	min	125	136	143	148	150	152	154
180	min	103	110	114	118	119	121	123
240	min	95.6	99.3	102	104	105	106	107
300	min	51.7	54.6	56.3	57.4	57.7	58.1	58.6
600	min	27.5	29.2	30.3	31.0	31.2	31.5	31.8
1200	min							

**- 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
Time	min	136	163	181	195	202	206	210
5	min	86.7	104	115	123	125	128	131
10	min	76.2	82.8	85.8	88.4	89.1	90.0	91.0
15	min	44.5	49.7	51.7	53.3	53.8	54.4	55.1
30	min	25.5	28.2	29.3	30.0	30.2	30.5	30.8
60	min	15.1	16.2	16.8	17.3	17.5	17.7	17.9
120	min	11.0	11.7	12.1	12.4	12.5	12.6	12.7
180	min	8.96	9.44	9.70	9.89	9.96	10.1	10.2
240	min	7.85	8.26	8.50	8.67	8.73	8.80	8.87
300	min	4.41	4.65	4.76	4.82	4.84	4.87	4.91
600	min	2.32	2.44	2.50	2.55	2.57	2.59	2.61
1200	min							

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

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

Performance may vary depending on application. All specifications are correct at time of creation. All specifications and operation conditions contained in this datasheet are subject to change or improvement without prior notice to the user. This data is for evaluation purposes only. No guarantee is intended or implied by this data. For clarification and updated information, please contact us.