

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

20 hour rate	(2.5A to 10.50V)	50Ah
10 hour rate	(4.75A to 10.50V)	47.5Ah
5 hour rate	(8.5A to 10.20V)	42.5Ah
1 C	(50A to 9.60V)	28.33Ah
3 C	(150A to 9.60V)	20Ah

#### Weight

Approx. 15.1kg(33.2Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 5 mΩ

#### Maximum Discharge Current for

5 seconds: 600A

#### Charging Methods at 25°C(77°F)

Cycle use:

Charging Voltage 14.4 to 15.0V

Coefficient -5.0mV/°C/cell

Maximum Charging Current : 15A

Standby use:

Float Charging Voltage 13.5 to 13.8V

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	97%
3 month	92%
6 month	85%

#### Case Material

ABS UL94 HB

Option: Flammability resistance of (UL94 V-0)

#### Terminal

F8



### ⚡ Dimensions

Length (L)  $199 \pm 0.12$  (7.83 ± 0.04)

Width (W)  $166 \pm 0.12$  (6.54 ± 0.04)

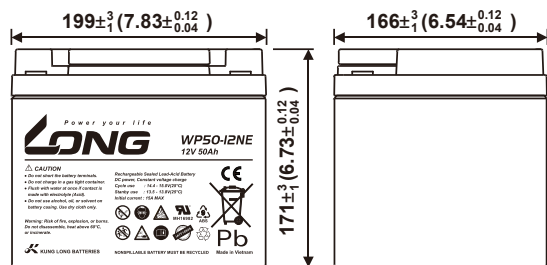
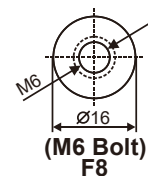
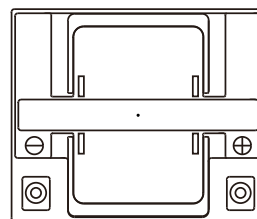
Height (H)  $171 \pm 0.12$  (6.73 ± 0.04)

Overall Height (HT)  $171 \pm 0.12$  (6.73 ± 0.04)

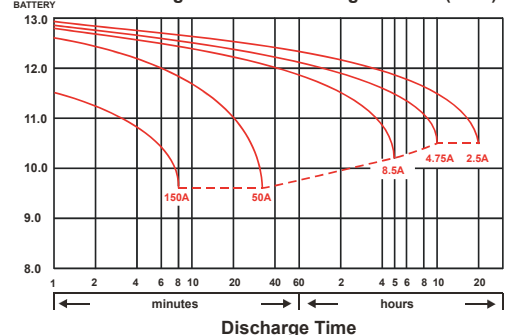
#### Description of torque value of hardware for the terminals:

Recommended torque value M6: 7 N-m (71 kgf-cm)

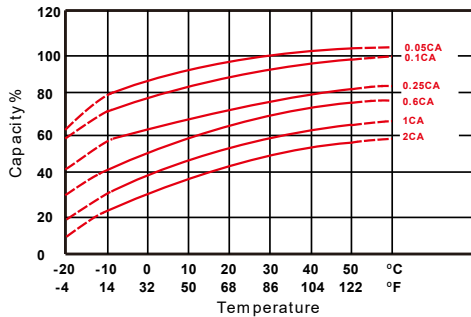
Maximum allowable torque value M6: 10 N-m (102 kgf-cm)  
mm(inch)



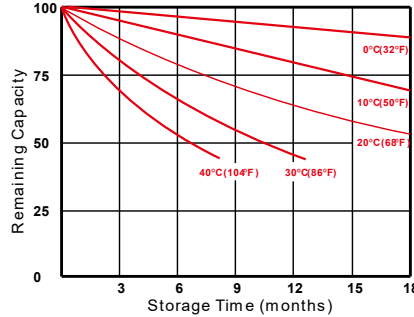
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



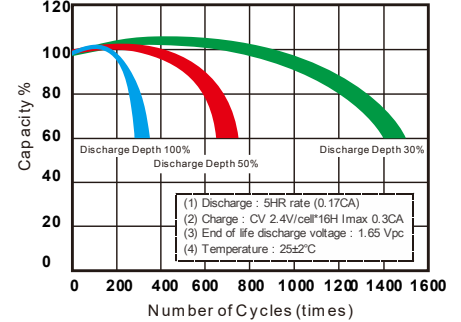
**Effect of Temperature on Capacity 25°C(77°F)**



**Capacity Retention Characteristic**



**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								
5	min	235	282	316	338	343	348	354
10	min	168	199	218	228	232	237	241
15	min	124	143	157	163	166	169	171
30	min	76.4	88.0	95.2	98.3	99.5	101	102
60	min	52.6	55.4	57.0	58.3	58.8	59.5	59.9
120	min	29.2	32.0	33.3	34.5	34.8	35.3	35.8
180	min	20.8	22.7	23.8	24.7	25.0	25.3	25.7
240	min	17.2	18.3	19.0	19.7	19.8	20.2	20.5
300	min	15.9	16.6	17.0	17.3	17.5	17.7	17.8
600	min	8.62	9.10	9.38	9.57	9.62	9.68	9.77
1200	min	4.58	4.87	5.05	5.17	5.20	5.25	5.30

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

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%)

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