

### Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

20 hour rate	(0.75A	to	10.50V)	15Ah
2 hour rate	(6A	to	9.60V)	12Ah
1 C	(15A	to	9.60V)	8.5Ah
3 C	(45A	to	9.60V)	6Ah

#### Weight

Approx. 4.5kg(9.9Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 9 mΩ

#### Maximum Discharge Current for

5 seconds: 225A

#### Charging Methods at 25°C(77°F)

Cycle use:	
Charging Voltage	14.4 to 15.0V
Coefficient -5.0mV/°C/cell	
Maximum Charging Current :	4.5A
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	92%
3 month	90%
6 month	80%

#### Case Material

ABS UL94 HB  
Option: Flammability resistance of (UL94 V-0)

#### Design Life

3-5 Years.

#### Terminal



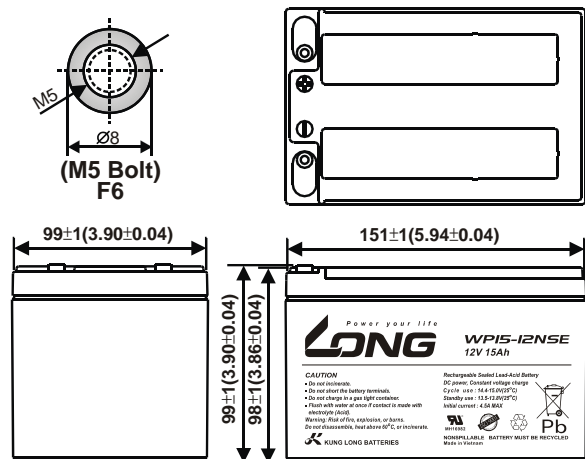
### Dimensions

Length (L)	151 ± 1 (5.94 ± 0.04)
Width (W)	99 ± 1 (3.90 ± 0.04)
Height (H)	98 ± 1 (3.86 ± 0.04)
Overall Height (HT)	99 ± 1 (3.90 ± 0.04)

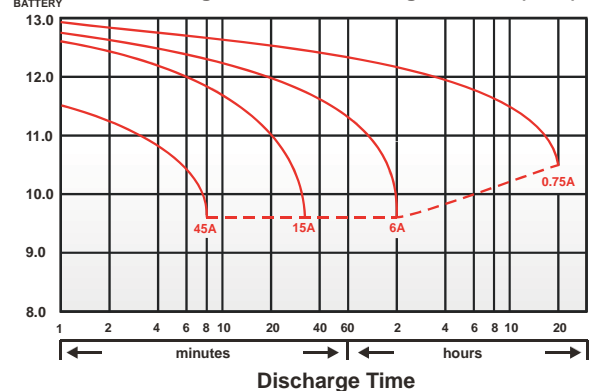
#### Description of torque value of hard ware for the terminals:

Recommended torque value	M5:4 N-m (41kgf-cm)
Maximum allowable torque value	M5:6 N-m (61kgf-cm)

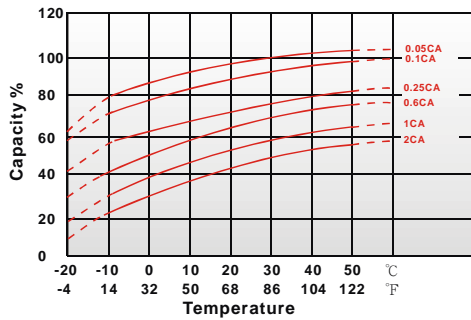
mm(inch)



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



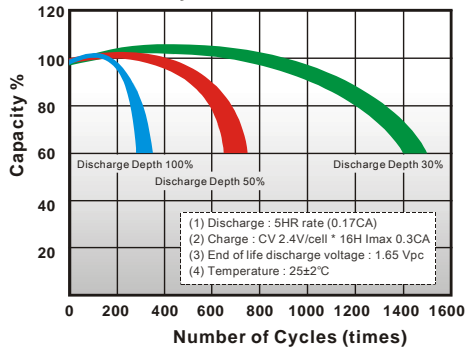
Effect of Temperature on Capacity 25°C(77°F)



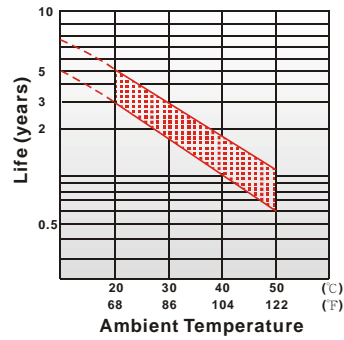
Capacity Retention Characteristic



Cycle Service Life



Trickle (or float) 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	87.6	93.9	98.6	104	110	113	116
10	min	59.9	71.4	72.9	74.1	74.8	75.6	76.3
15	min	49.4	54.4	56.1	57.3	58.1	59.6	60.6
30	min	29.8	31.6	32.5	33.6	34.0	34.2	34.8
60	min	17.2	17.9	18.6	19.0	19.2	19.3	19.5
120	min	9.72	10.2	10.4	10.7	10.7	10.8	11.0
180	min	6.95	7.17	7.33	7.46	7.51	7.55	7.65
240	min	5.42	5.69	5.87	5.93	5.96	5.99	6.01
300	min	4.60	4.72	4.80	4.87	4.91	4.94	4.96
600	min	2.76	2.79	2.83	2.86	2.89	2.98	3.00
1200	min	1.43	1.49	1.53	1.56	1.59	1.60	1.61

#### - 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	46.3	51.0	55.3	59.5	62.8	64.3	67.7
10	min	32.4	39.7	41.7	42.3	44.0	44.4	46.3
15	min	26.7	30.2	32.1	32.3	33.8	34.7	36.3
30	min	16.1	17.5	18.6	19.7	20.6	20.8	21.8
60	min	8.80	9.22	9.56	9.83	10.0	10.1	10.1
120	min	4.74	4.95	5.07	5.19	5.22	5.28	5.51
180	min	3.48	3.57	3.65	3.71	3.73	3.77	3.83
240	min	2.69	2.74	2.81	2.87	2.89	2.94	2.99
300	min	2.34	2.39	2.42	2.45	2.46	2.48	2.50
600	min	1.23	1.29	1.34	1.37	1.38	1.39	1.40
1200	min	0.692	0.741	0.750	0.756	0.758	0.761	0.764

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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