

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

20 hour rate	(1.5A	to	10.50V)	30Ah
10 hour rate	(2.85A	to	10.50V)	28.5Ah
5 hour rate	(5.1A	to	10.20V)	25.5Ah
1 C	(30A	to	9.60V)	17Ah
3 C	(90A	to	9.60V)	12Ah

#### Weight

Approx. 9.3kg(20.5Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 9.4 mΩ

#### Maximum Discharge Current for

5 seconds: 450A

#### Charging Methods at 25°C(77°F)

Cycle use:	
Charging Voltage	14.4 to 15.0V
Coefficient	-5.0mV/°C/cell
Maximum Charging Current :	9A
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

F6

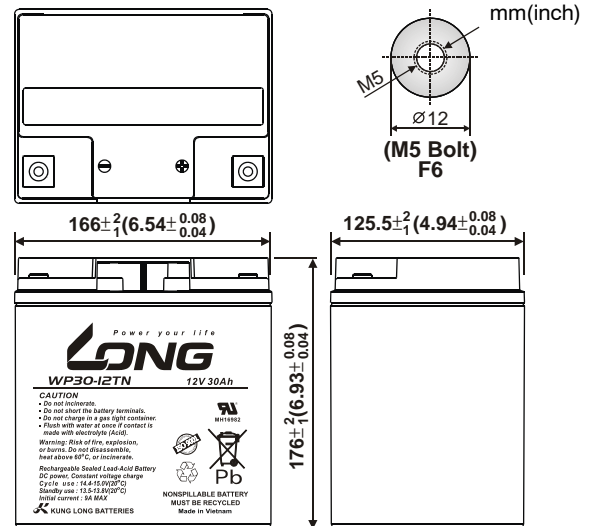


### ⚡ Dimensions

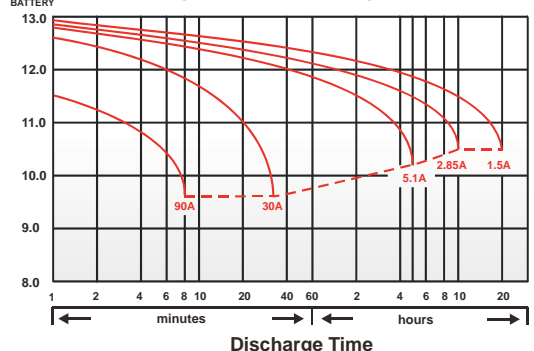
Length (L)	166 $\pm$ 2 (6.54 $\pm$ 0.08) <sub>-0.04</sub>
Width (W)	125.5 $\pm$ 2 (4.94 $\pm$ 0.08) <sub>-0.04</sub>
Height (H)	176 $\pm$ 2 (6.93 $\pm$ 0.08) <sub>-0.04</sub>
Overall Height (HT)	176 $\pm$ 2 (6.93 $\pm$ 0.08) <sub>-0.04</sub>

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

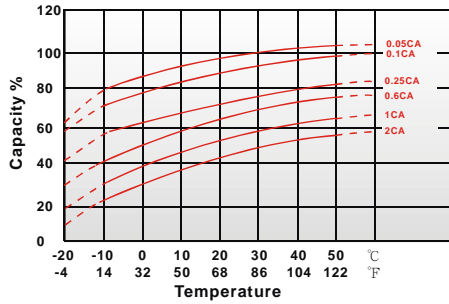
Recommended torque value	M5: 4 N-m (41kgf-cm)
Maximum allowable torque value	M5: 6 N-m (61kgf-cm)



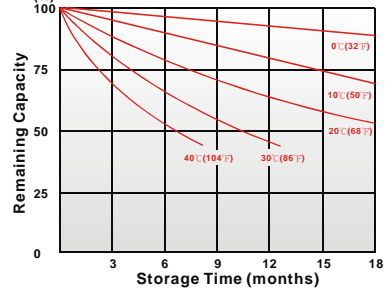
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



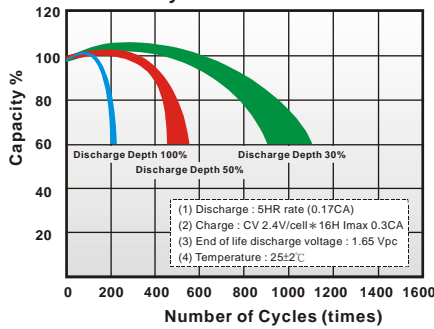
Effect of Temperature on Capacity 25°C (77°F)



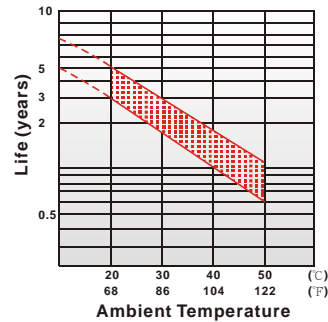
Capacity Retention Characteristic



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	min	141	177	198	209	213	217	222
5	min	108	124	135	142	146	149	153
10	min	94.4	105	110	114	116	117	119
15	min	58.4	63.1	65.0	66.5	66.8	67.4	68.1
30	min	34.4	37.1	38.5	39.5	39.8	40.4	40.9
60	min	20.3	21.7	22.5	23.2	23.3	23.7	24.0
120	min	15.5	16.1	16.4	16.7	16.8	17.0	17.2
180	min	12.7	13.2	13.5	13.7	13.7	13.8	14.0
240	min	10.4	10.9	11.1	12.1	11.3	11.4	11.5
300	min	5.81	6.02	6.17	6.30	6.33	6.39	6.45
600	min	3.13	3.26	3.33	3.38	3.40	3.44	3.47
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	75.3	96.7	110	118	121	124	128
5	min	56.4	65.5	71.8	77.0	78.8	81.0	83.4
10	min	48.6	54.4	57.1	59.7	60.6	61.4	62.7
15	min	29.3	31.8	32.9	33.8	34.1	34.5	34.9
30	min	16.9	18.3	19.2	19.8	20.0	20.2	20.4
60	min	10.4	10.9	11.3	11.6	11.7	11.8	11.9
120	min	7.51	7.83	8.04	8.21	8.28	8.35	8.46
180	min	6.12	6.41	6.54	6.66	6.70	6.74	6.81
240	min	5.09	5.34	5.46	5.55	5.59	5.63	5.68
300	min	2.81	2.92	3.00	3.06	3.08	3.11	3.14
600	min	1.52	1.57	1.61	1.64	1.65	1.67	1.69
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%)

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