

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

10 hour rate	(11A	to	10.80V)	110Ah
5 hour rate	(18.7A	to	10.20V)	93.5Ah
1 hour rate	(66A	to	9.60V)	66Ah
1C	(110A	to	9.60V)	69.67Ah

#### Weight

Approx. 32.5kg(71.5Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 5 mΩ

#### Maximum Discharge Current for

5 seconds:1200A

#### Charging Methods at 25°C(77°F)

Cycle use:	
Charging Voltage	14.4 to 15.0V
Coefficient	-5.0mV/°C/cell
Maximum Charging Current :	33A
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	98%
3 month	94%
6 month	85%

#### Case Material

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

#### Design Life

12 Years.

#### Terminal

F8



### ⚡ Dimensions

**Length (L)** 338±2-1 (13.31±0.08-0.04)

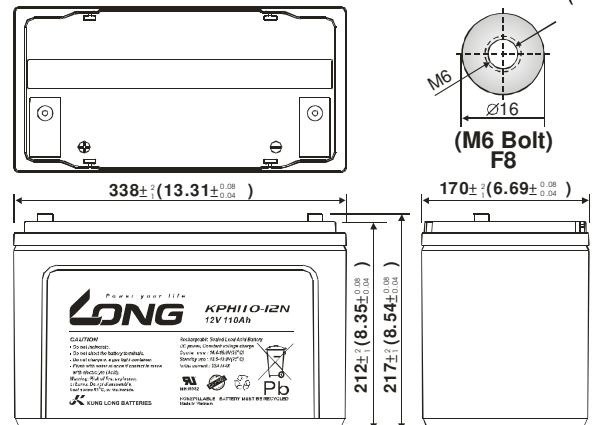
**Width (W)** 170±2-1 (6.69±0.08-0.04)

**Height (H)** 212±2-1 (8.35±0.08-0.04)

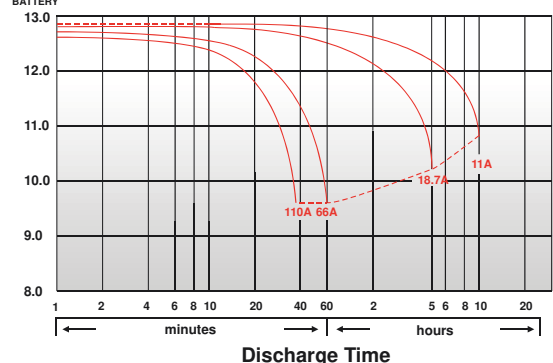
**Overall Height (HT)** 217±2-1 (8.54±0.08-0.04)

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

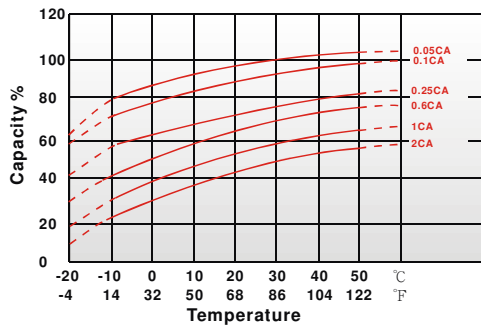
Recommended torque value M6: 7 N-m (71kgf-cm)  
Maximum allowable torque value M6: 10 N-m(102kgf-cm)  
mm(inch)



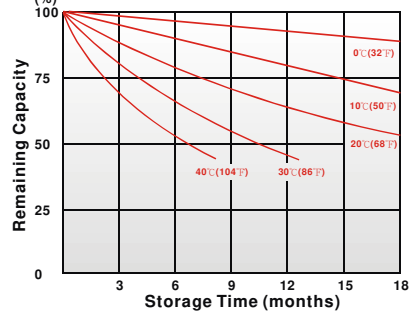
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



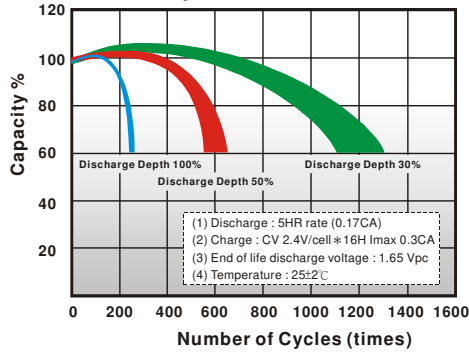
Effect of Temperature on Capacity 25°C(77°F)



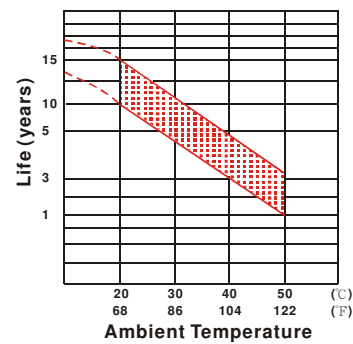
Capacity Retention Characteristic



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	min							
10	min	393	429	469	498	499	512	515
15	min	336	364	380	400	404	416	419
30	min	208	220	229	238	241	246	248
60	min	142	142	142	143	145	146	147
90	min	92.6	97.4	101	104	105	107	108
120	min	75.8	79.7	82.5	84.2	85.2	86.5	87.3
180	min	56.7	59.7	61.3	62.2	62.8	63.7	64.4
240	min	40.0	42.2	46.7	47.5	48.4	49.3	49.8
300	min	36.5	38.9	40.0	40.8	41.3	42.0	42.3
600	min	19.1	21.1	21.6	22.2	22.6	22.7	22.8
1200	min	11.1	11.4	11.7	11.9	12.1	12.1	12.2

#### - 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							
10	min	220	232	245	254	260	270	285
15	min	177	194	214	220	224	232	241
30	min	118	123	126	128	130	131	133
60	min	57.0	60.2	64.0	67.3	69.4	70.2	72.0
90	min	40.0	43.2	45.4	46.3	47.2	48.6	49.8
120	min	27.6	32.1	35.6	39.1	39.9	40.9	42.2
180	min	23.7	26.3	31.0	32.8	33.3	34.0	35.0
240	min	20.2	21.5	22.8	23.2	23.5	24.0	24.5
300	min	16.9	17.4	18.5	19.2	19.7	19.9	20.2
600	min	10.3	11.0	11.0	11.1	11.2	11.2	11.2
1200	min	5.45	5.62	5.70	5.80	5.90	5.90	6.00

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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