

⚡ Specifications

Nominal Voltage(V)

12V

Nominal Capacity

20 hour rate	(2.25A to 10.50V)	45Ah
5 hour rate	(7.65A to 10.20V)	38.25Ah
1 hour rate	(24.75A to 9.60V)	24.75Ah
1 C	(45A to 9.60V)	24Ah

Weight

Approx. 15kg(33Lbs.)

Internal Resistance (at 1KHz)

Approx. 6 mΩ

Maximum Discharge Current for

5 seconds:540A

Charging Methods at 25°C(77°F)

Cycle use:	
Charging Voltage	13.8 to 14.4V
Coefficient	-5.0mV/°C/cell
Maximum Charging Current :	13.5A
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

7-10 Years.

Terminal

F8

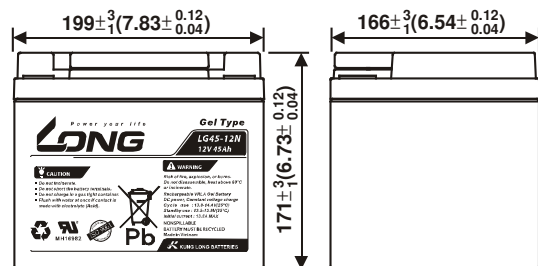
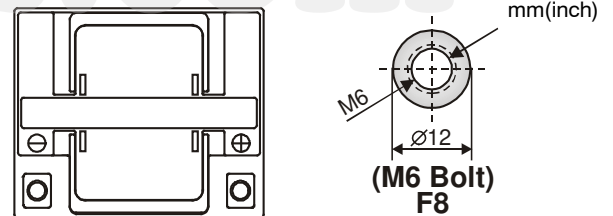


⚡ Dimensions

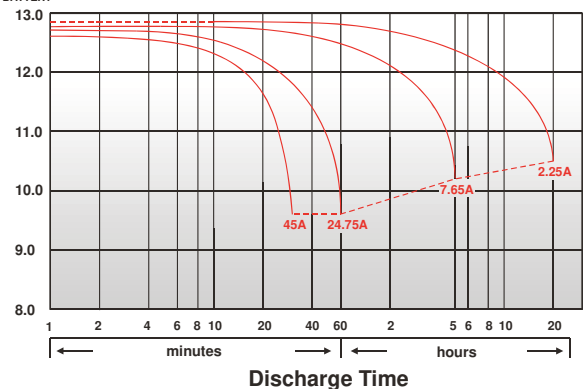
Length (L)	199+3-1 (7.83+0.12-0.04)
Width (W)	166+3-1 (6.54+0.12-0.04)
Height (H)	171+3-1 (6.73+0.12-0.04)
Overall Height (HT)	171+3-1 (6.73+0.12-0.04)

Description of torque value of hard ware for the terminals:

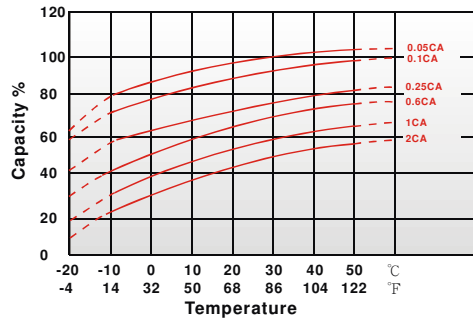
Recommended torque value	M6: 7 N-m (71kgf-cm)
Maximum allowable torque value	M6: 10 N-m (102kgf-cm)



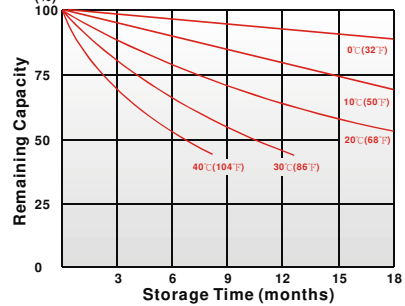
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



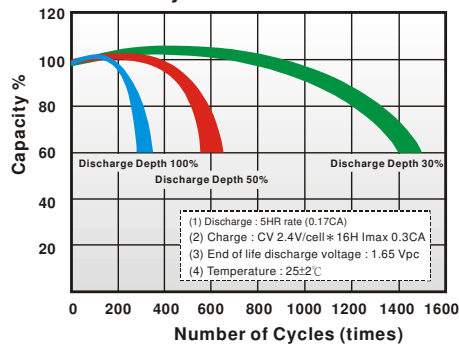
Effect of Temperature on Capacity 25°C (77°F)



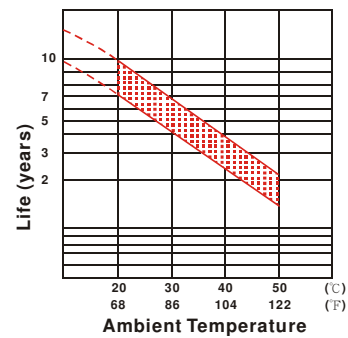
Capacity Retention Characteristic



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	170	221	254	273	280	289	299
10	min	125	157	180	195	201	206	209
15	min	112	130	142	149	151	152	154
30	min	62.0	71.5	78.2	81.7	82.7	83.8	85.0
60	min	41.8	45.5	47.8	49.7	50.3	51.2	52.0
120	min	22.7	24.8	26.3	27.5	27.8	28.3	28.8
180	min	18.3	19.8	21.0	21.8	22.2	22.6	22.8
240	min	15.7	16.5	17.2	17.7	17.8	18.0	18.2
300	min	13.7	14.6	15.1	15.4	15.6	15.7	15.9
600	min	8.07	8.56	8.86	9.07	9.16	9.25	9.33
1200	min	4.25	4.51	4.67	4.78	4.83	4.88	4.92

- 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	90.4	122	144	158	163	169	178
10	min	65.8	83.4	96.1	105	108	111	114
15	min	57.5	67.7	74.6	79.1	80.1	81.5	82.6
30	min	31.7	37.3	41.1	43.6	44.2	45.0	45.8
60	min	23.1	24.5	25.4	26.0	26.2	26.5	26.7
120	min	12.3	13.1	13.6	14.0	14.1	14.3	14.5
180	min	9.48	10.2	10.7	11.0	11.1	11.3	11.4
240	min	7.87	8.35	8.64	8.85	8.94	9.02	9.10
300	min	6.83	7.25	7.50	7.68	7.75	7.83	7.90
600	min	4.02	4.24	4.39	4.51	4.56	4.60	4.65
1200	min	2.11	2.23	2.31	2.37	2.39	2.42	2.45

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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