

⚡ Specifications

Nominal Voltage(V)

12V

Nominal Capacity

20 hour rate	(2A	to	10.50V)	40Ah
5 hour rate	(6.8A	to	10.20V)	34Ah
1 hour rate	(22A	to	9.60V)	22Ah
1 C	(40A	to	9.60V)	21.33Ah

Weight

Approx. 13.3kg(29.3Lbs.)

Internal Resistance (at 1KHz)

Approx. 8 mΩ

Maximum Discharge Current for

5 seconds:480A

Charging Methods at 25°C(77°F)

Cycle use:	
Charging Voltage	13.8 to 14.4V
Coefficient -5.0mV/°C/cell	
Maximum Charging Current :	12A
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



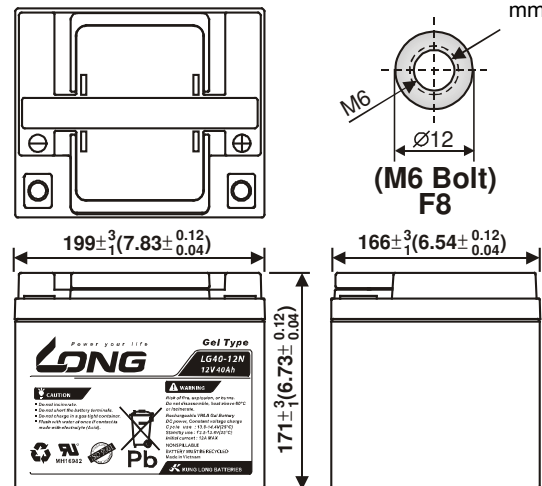
⚡ Dimensions

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)

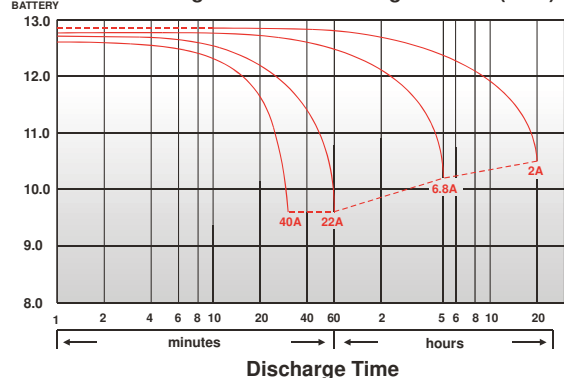
Description of torque value of hard ware for the terminals:

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

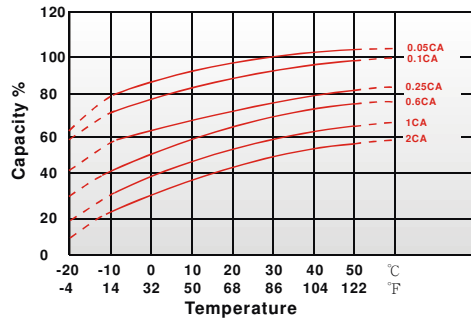
mm(inch)



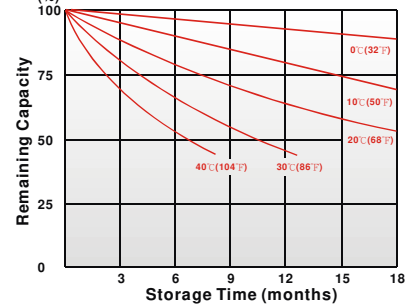
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



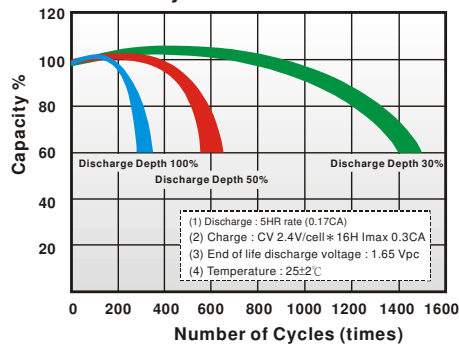
Effect of Temperature on Capacity 25°C (77°F)



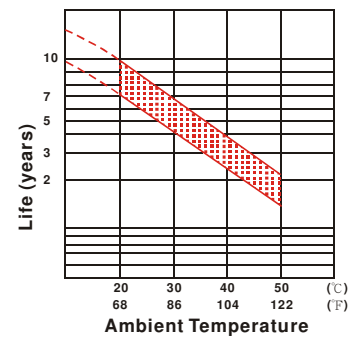
Capacity Retention Characteristic



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	201	240	269	288	293	298	303
10	min	128	154	173	185	188	191	195
15	min	99.5	117	129	137	139	141	144
30	min	53.1	62.4	68.9	73.1	74.1	75.3	76.5
60	min	41.2	42.6	43.7	44.5	44.8	45.1	45.6
120	min	24.3	25.2	25.7	26.2	26.3	26.6	26.9
180	min	17.7	18.3	18.8	19.1	19.3	19.4	19.7
240	min	14.0	14.4	14.6	14.9	15.0	15.1	15.2
300	min	12.8	13.1	13.3	13.6	13.7	13.8	13.6
600	min	6.79	7.01	7.20	7.40	7.48	7.58	7.73
1200	min	3.48	3.68	3.85	4.00	4.07	4.15	4.28

- 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	104	126	141	151	154	157	160
10	min	61.6	75.1	84.1	89.5	91.3	93.1	94.9
15	min	50.9	59.8	66.0	70.0	71.2	72.2	73.3
30	min	29.6	33.4	36.8	38.0	38.8	40.0	40.6
60	min	21.3	22.0	22.4	22.7	22.9	23.1	23.4
120	min	11.8	12.3	12.7	13.0	13.1	13.3	13.4
180	min	8.71	9.04	9.25	9.40	9.49	9.59	9.78
240	min	6.90	7.17	7.41	7.58	7.60	7.64	7.72
300	min	6.28	6.52	6.67	6.80	6.84	6.87	6.94
600	min	3.50	3.65	3.80	3.87	3.91	3.97	4.00
1200	min	1.84	1.92	2.00	2.04	2.06	2.09	2.11

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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