

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

20 hour rate	(2A to 10.50V)	40Ah
10 hour rate	(3.8A to 10.50V)	38Ah
5 hour rate	(6.8A to 10.20V)	34Ah
1C	(40A to 9.60V)	25.33Ah
3C	(120A to 9.60V)	16Ah

#### Weight

Approx. 13.4kg(29.5Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 7.5 mΩ

#### Maximum Discharge Current for

5 seconds:480A

#### Charging Methods at 25°C (77°F)

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 & Standard

Expected Trickle Design Life: 10-12 years at 20°C according to Eurobat.

#### Terminal

F8



### ⚡ Dimensions

#### Length (L)

197.7<sup>+2</sup><sub>-1</sub> (7.78<sup>+0.08</sup><sub>-0.04</sub>)

#### Width (W)

166<sup>+2</sup><sub>-1</sub> (6.54<sup>+0.08</sup><sub>-0.04</sub>)

#### Height (H)

171<sup>+2</sup><sub>-1</sub> (6.73<sup>+0.08</sup><sub>-0.04</sub>)

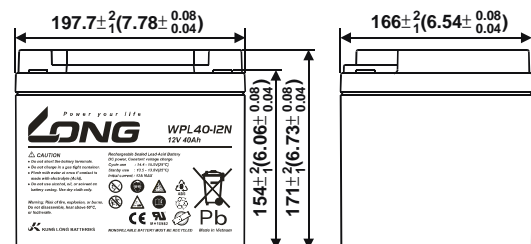
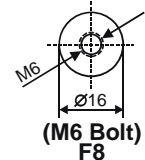
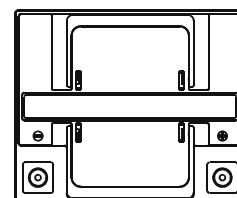
#### Overall Height (HT)

171<sup>+2</sup><sub>-1</sub> (6.73<sup>+0.08</sup><sub>-0.04</sub>)

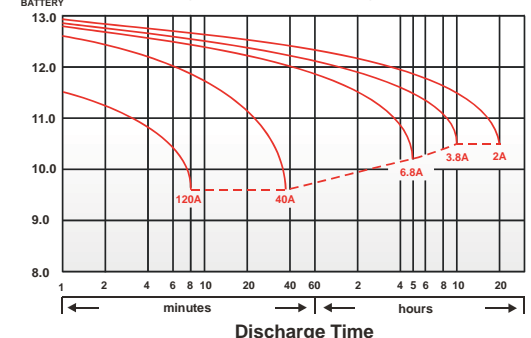
#### Description of torque value of hard ware for the terminals:

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

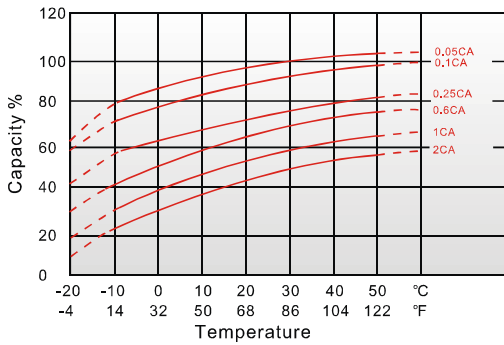
mm(inch)



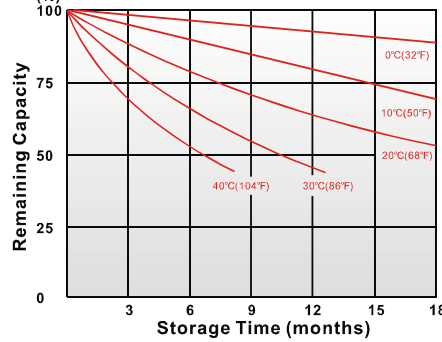
(v) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



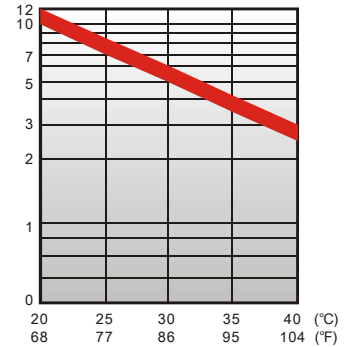
Effect of Temperature on Capacity 25°C(77°F)



Capacity Retention Characteristic



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	204	215	227	230	232	235	237
10	min	166	178	196	198	200	203	205
15	min	134	140	147	149	151	153	154
20	min	111	116	122	123	123	124	125
30	min	83.9	87.0	90.8	92.0	93.1	93.8	94.5
60	min	54.8	55.7	56.8	58.0	59.3	60.0	60.8
90	min	41.4	41.7	42.4	43.3	44.5	44.6	44.9
120	min	32.5	32.8	33.6	33.8	34.0	34.1	34.3
180	min	22.8	23.0	23.4	23.6	23.8	23.9	24.1
240	min	17.3	17.6	17.9	18.3	18.4	18.6	19.0
300	min	14.4	15.0	15.2	15.3	15.4	15.4	15.5
480	min	9.46	9.67	9.89	9.94	10.0	10.0	10.1
600	min	6.86	7.05	7.27	7.40	7.50	7.57	7.74
1200	min	3.51	3.70	3.89	4.01	4.11	4.19	4.30

#### - 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	113	121	126	127	129	130	133
10	min	95.0	101	104	106	107	107	108
15	min	69.0	73.5	79.1	80.0	81.0	82.0	82.9
20	min	57.8	59.7	62.1	62.4	62.9	63.4	63.9
30	min	42.9	44.7	46.6	47.0	47.4	47.9	48.5
60	min	29.7	30.2	30.9	31.3	31.8	32.2	32.8
90	min	20.7	21.0	21.4	21.6	21.8	22.0	22.3
120	min	16.8	16.9	17.0	17.1	17.2	17.3	17.4
180	min	11.3	11.4	11.6	11.7	11.8	11.9	12.1
240	min	8.75	8.84	9.03	9.13	9.22	9.32	9.37
300	min	7.28	7.39	7.50	7.54	7.56	7.58	7.64
480	min	4.74	4.79	4.88	4.90	4.91	4.92	4.95
600	min	3.91	3.96	4.01	4.03	4.04	4.05	4.08
1200	min	2.03	2.06	2.12	2.13	2.14	2.15	2.15

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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