

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

20 hour rate	(1.4A	to	10.50V)	28Ah
10 hour rate	(2.66A	to	10.50V)	26.6Ah
5 hour rate	(4.76A	to	10.20V)	23.8Ah
1C	(28A	to	9.60V)	17.73Ah
3C	(84A	to	9.60V)	11.2Ah

#### Weight

Approx. 9.18kg(20.2Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 9.4 mΩ

#### Maximum Discharge Current for

5 seconds:420A

#### Charging Methods at 25°C (77°F)

Cycle use:	
Charging Voltage	14.4 to 15.0V
Coefficient -5.0mV/°C/cell	
Maximum Charging Current :	8.4A
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

F9

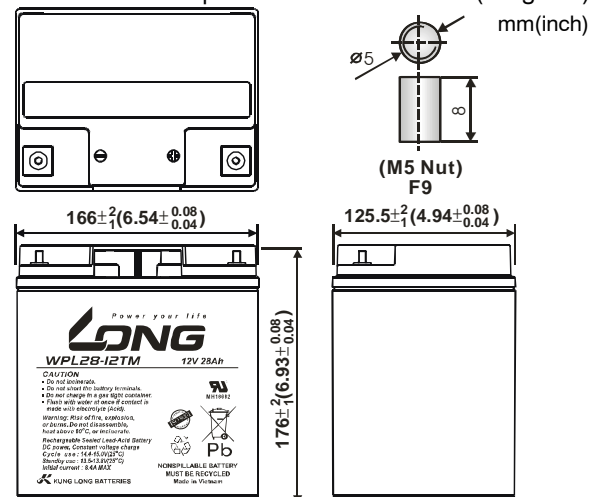


### ⚡ Dimensions

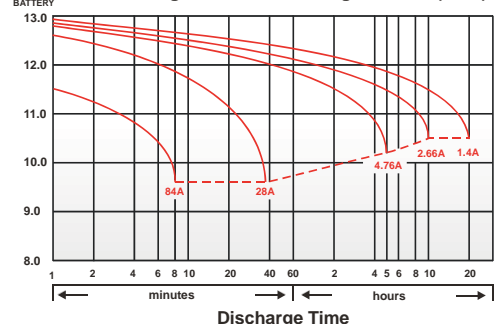
Length (L)	$166 \pm_{-1}^{+2}$ (6.54 $\pm_{0.04}^{+0.08}$ )
Width (W)	$125.5 \pm_{-1}^{+2}$ (4.94 $\pm_{0.04}^{+0.08}$ )
Height (H)	$176 \pm_{-1}^{+2}$ (6.93 $\pm_{0.04}^{+0.08}$ )
Overall Height (HT)	$176 \pm_{-1}^{+2}$ (6.93 $\pm_{0.04}^{+0.08}$ )

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

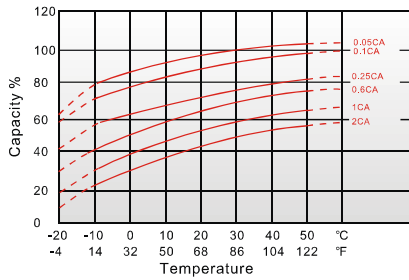
Recommended torque value	M5: 2.5 N-m (25kgf-cm)
Maximum allowable torque value	M5: 3.5 N-m (36kgf-cm)



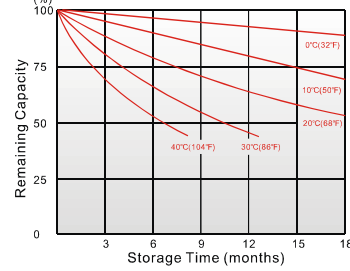
(V) Discharge Time VS. Discharge Current (25°C)



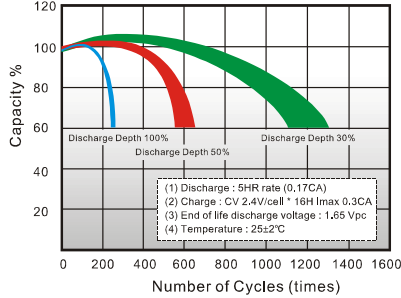
Effect of Temperature on Capacity 25°C(77°F)



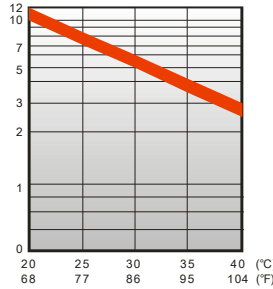
Capacity Retention Characteristic



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								
2	min	181	210	234	245	255	264	273
4	min	157	172	186	199	211	221	231
5	min	139	161	179	186	191	196	200
6	min	130	156	166	173	180	185	190
8	min	125	139	145	150	155	160	165
10	min	107	118	124	128	133	135	137
15	min	86.4	94.7	102	104	106	108	110
20	min	76.6	82.3	83.4	84.3	85.1	85.9	86.7
30	min	54.4	58.7	59.9	60.7	61.4	62.1	62.8
45	min	45.4	48.5	49.4	49.9	50.3	50.6	50.9
60	min	35.0	36.5	36.9	37.2	37.5	37.8	38.2
90	min	25.0	25.9	26.5	26.9	27.3	27.5	27.7
120	min	21.0	21.9	22.3	22.5	22.6	22.8	23.0
180	min	15.5	16.2	16.4	16.6	16.7	16.8	16.9
240	min	11.9	12.4	12.7	12.8	12.9	13.0	13.1
300	min	10.0	10.4	10.5	10.6	10.7	10.8	10.9
600	min	5.56	5.72	5.85	5.86	5.88	5.89	5.91
1200	min	3.00	3.03	3.09	3.11	3.12	3.14	3.15

#### - 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								
2	min	92.5	115	133	148	158	167	172
4	min	80.5	96.5	109	114	119	124	128
5	min	72.5	88.0	102	107	112	116	119
6	min	70.8	83.8	90.5	96.9	103	108	113
8	min	68.3	75.3	81.6	85.4	88.4	90.6	92.6
10	min	57.1	63.9	66.2	69.6	72.4	75.2	77.7
15	min	44.6	49.0	52.7	54.6	56.1	57.6	58.6
20	min	35.7	39.2	42.1	43.7	44.9	46.1	46.9
30	min	27.8	29.9	31.0	31.9	32.6	33.2	33.4
45	min	21.1	22.6	23.0	24.2	24.7	24.9	25.1
60	min	16.3	17.4	18.1	18.6	19.1	19.3	19.4
90	min	12.6	13.6	14.0	14.4	14.7	15.0	15.2
120	min	10.6	11.3	11.5	11.8	11.9	12.2	12.3
180	min	7.39	7.69	7.94	8.05	8.18	8.35	8.38
240	min	5.97	6.09	6.23	6.34	6.41	6.48	6.51
300	min	4.95	5.08	5.19	5.33	5.38	5.42	5.45
600	min	2.74	2.82	2.91	2.93	2.95	2.97	2.98
1200	min	1.45	1.48	1.51	1.53	1.54	1.55	1.56

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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