

### ⚡ 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)

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

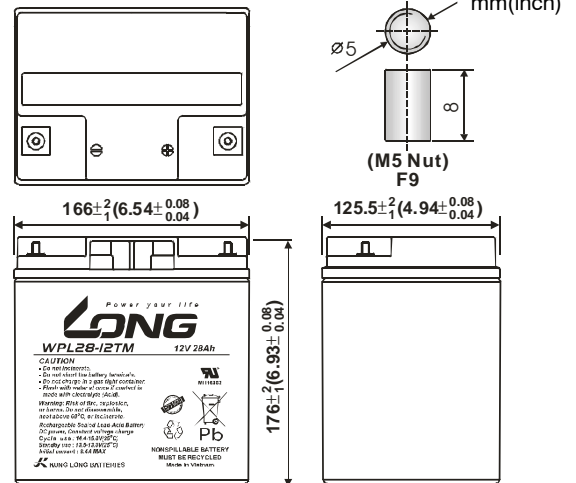


### ⚡ Dimensions

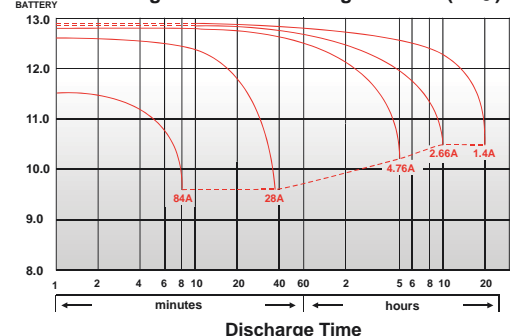
Length (L)	166±2-1 (6.54±0.08-0.04)
Width (W)	125.5±2-1 (4.94±0.08-0.04)
Height (H)	176±2-1 (6.93±0.08-0.04)
Overall Height (HT)	176±2-1 (6.93±0.08-0.04)

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

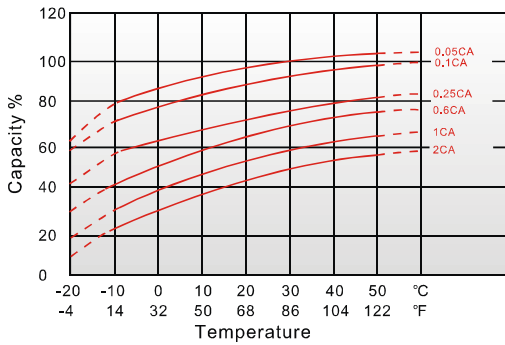
Recommended torque value	M5:4 N-m (41kgf-cm)
Maximum allowable torque value	M5:6 N-m (61kgf-cm)



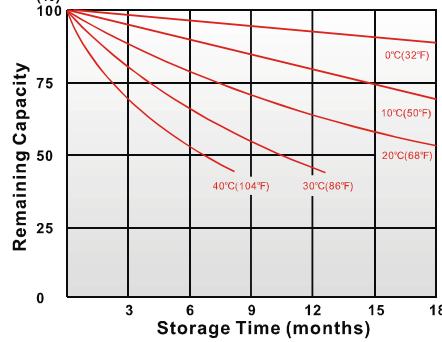
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



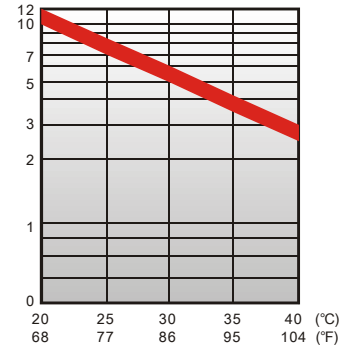
Effect of Temperature on Capacity 25°C(77°F)



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								
2	min	176	206	234	245	255	264	273
4	min	156	177	193	203	211	220	225
5	min	150	170	185	195	203	211	216
6	min	126	151	166	173	180	185	190
8	min	121	135	145	150	155	160	165
10	min	104	114	124	128	133	135	137
15	min	82.1	92.0	102	104	106	108	110
20	min	74.3	79.8	83.4	84.3	85.1	85.9	86.7
30	min	52.8	57.0	59.9	60.8	61.4	62.1	62.8
45	min	44.9	48.0	50.4	50.9	51.3	51.6	51.9
60	min	34.0	35.6	36.9	37.2	37.5	37.8	38.2
90	min	24.0	25.3	26.5	26.9	27.3	27.5	27.7
120	min	20.3	21.4	22.3	22.5	22.6	22.8	23.0
180	min	14.9	15.7	16.4	16.6	16.7	16.8	16.9
240	min	11.3	12.1	12.7	12.8	12.9	13.0	13.1
300	min	9.7	10.2	10.5	10.6	10.7	10.8	10.9
600	min	5.35	5.59	5.85	5.86	5.88	5.89	5.91
1200	min	2.83	2.96	3.09	3.11	3.13	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	89.3	112	133	148	158	167	172
4	min	84.7	105	121	126	132	137	142
5	min	79.8	97.3	112	119	124	129	134
6	min	68.3	81.3	90.5	96.9	103	108	113
8	min	65.2	73.8	81.6	85.4	88.4	90.6	92.6
10	min	55.1	62.0	66.2	69.6	72.4	75.2	77.7
15	min	42.8	47.9	52.7	54.6	56.1	57.6	58.6
20	min	34.2	38.4	42.1	43.7	44.9	46.1	46.9
30	min	26.9	29.0	31.0	31.9	32.6	33.2	33.4
45	min	20.4	21.9	23.0	24.2	24.7	24.9	25.1
60	min	15.7	16.9	18.1	18.6	19.1	19.3	19.4
90	min	12.2	13.2	14.0	14.4	14.7	15.0	15.2
120	min	10.2	10.9	11.5	11.8	11.9	12.2	12.3
180	min	7.08	7.50	7.94	8.05	8.18	8.35	8.38
240	min	5.66	5.97	6.23	6.34	6.41	6.48	6.51
300	min	4.79	4.95	5.19	5.33	5.38	5.42	5.45
600	min	2.58	2.74	2.91	2.93	2.95	2.97	2.98
1200	min	1.37	1.44	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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