

## WPL28-12TM 12Volt 28Ah

### Specifications

Nominal Voltage(V) **12V**

#### Nominal Capacity

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

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 (77 )

Cycle use:

Charging Voltage **14.4 to 15.0V**

Coefficient -5.0mV/ /cell

Maximum Charging Current : **8.4A**

Standby use:

Float Charging Voltage **13.5 to 13.8V**

Coefficient -3.0mV/ /cell

#### Operating Temperature Range

Charge **-15 (5 ) to 40 (104 )**

Discharge **-15 (5 ) to 50 (122 )**

Storage **-15 (5 ) to 40 (104 )**

#### Charge Retention (shelf life) at 20 (68 )

1 month **92%**

3 month **90%**

6 month **80%**

Case Material **ABS UL94 HB**

Option: Flammability resistance of (UL94 V-0)

Terminal **F9**

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

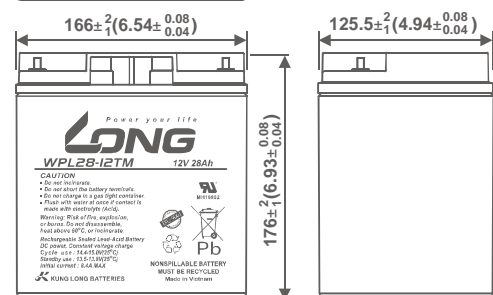
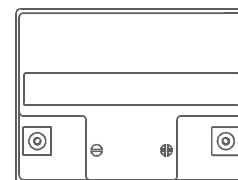
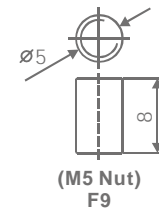
Recommended torque value **M5: 5 N-m (51kgf-cm)**

Maximum allowable torque value **M5: 6 N-m (61kgf-cm)**

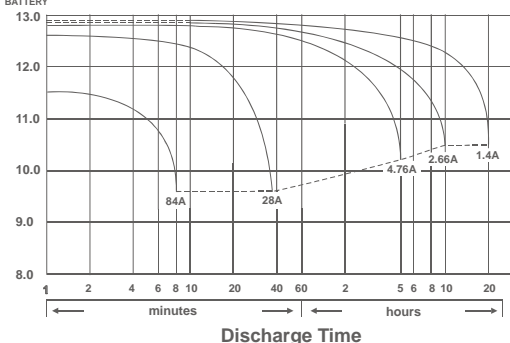


### Dimensions

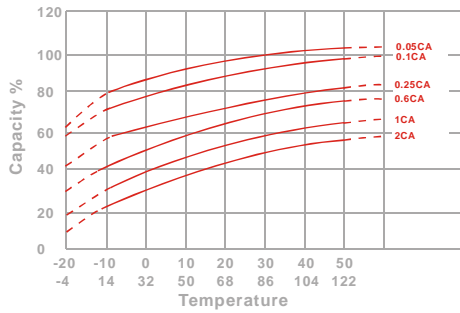
mm(inch)



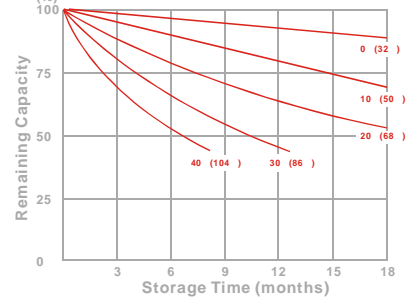
(v) FOR 12V BATTERY Discharge Time VS. Discharge Current (25 )



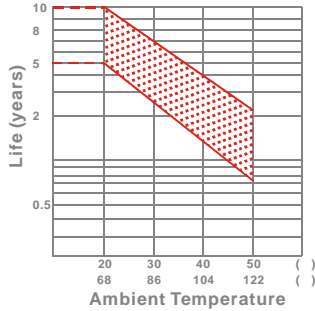
Effect of Temperature on Capacity 25 (77 )



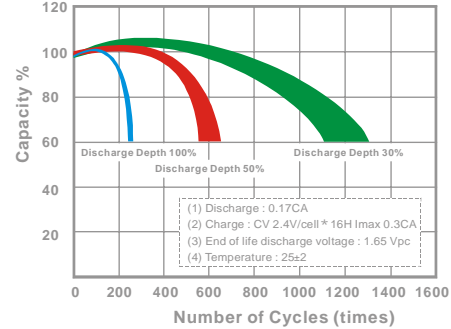
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



**- PERFORMANCE DATA**

Discharge Rates in Watts to Various End Voltages at 25 (77 )

End Voltage		1.80V	1.75V	1.70V	1.65V	1.60V
Time						
5	min	153	164	172	183	194
10	min	131	133	138	144	146
15	min	103	105	108	110	112
20	min	89.8	91.0	94.7	96.7	97.7
30	min	62.4	64.4	66.3	67.4	68.5
45	min	42.7	47.4	43.2	49.2	50.9
60	min	36.8	41.4	42.0	42.5	43.5
90	min	25.0	25.9	26.0	26.2	26.7
120	min	19.8	21.1	21.3	21.5	21.7
180	min	14.2	14.8	15.0	15.3	15.5
240	min	11.9	12.1	12.2	12.3	12.5
300	min	10.1	10.2	10.3	10.4	10.6
480	min	6.80	7.20	7.28	7.53	7.68
600	min	5.31	5.32	5.33	5.34	5.35
1200	min	2.81	2.82	2.83	2.84	2.85

- Discharge Rates in Amperes to Various End Voltages at 25 (77 )

End Voltage		1.80V	1.75V	1.70V	1.65V	1.60V
Time						
5	min	83.0	88.5	93.0	99.0	105
10	min	70.0	71.2	73.5	76.8	78.3
15	min	53.6	54.7	56.0	57.0	58.1
20	min	46.8	47.3	48.9	49.9	50.5
30	min	32.2	33.3	34.1	34.9	36.0
45	min	22.1	23.9	24.6	25.3	26.2
60	min	18.7	21.2	21.7	22.2	22.9
90	min	12.8	13.2	13.6	13.8	14.1
120	min	10.2	10.7	10.8	10.9	11.0
180	min	7.11	7.42	7.52	7.62	7.73
240	min	5.92	5.97	6.20	6.31	6.42
300	min	4.98	5.11	5.15	5.20	5.22
480	min	3.38	3.47	3.49	3.53	3.55
600	min	2.62	2.66	2.67	2.68	2.69
1200	min	1.41	1.42	1.43	1.44	1.45

All data on the spec. sheet is an average value:

The tolerance range : X<6min(+15%~-15%), 6min X<10min(+12%~-12%),10min X < 60min(+8% ~-8%), X 60min(+5%~-5%)

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