

### Specifications

#### Nominal Voltage(V)

12V

#### Nominal Power

15 mins rate: 28W/cell to 1.60V/cell

#### Nominal Capacity

|             |                   |        |
|-------------|-------------------|--------|
| 5 hour rate | (1.19A to 10.20V) | 5.95Ah |
| 1 C         | (7A to 9.60V)     | 4.43Ah |
| 3 C         | (21A to 9.60V)    | 2.8Ah  |

#### Cold Cranking Amperes (-18°C)

80A

#### Cranking Amperes (25°C)

120A

#### Weight

Approx. 2.19kg(4.82Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 20.9 mΩ

#### Maximum Discharge Current for

5 seconds: 140A

#### Charging Methods at 25°C(77°F)

|                            |                |
|----------------------------|----------------|
| Cycle use:                 |                |
| Charging Voltage           | 14.4 to 15.0V  |
| Coefficient                | -5.0mV/°C/cell |
| Maximum Charging Current : | 2.1A           |
| 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 | 97% |
| 3 month | 92% |
| 6 month | 85% |

#### Case Material

ABS UL94 HB  
Option: Flammability resistance of (UL94 V-0)

#### Design Life

3-5 Years.

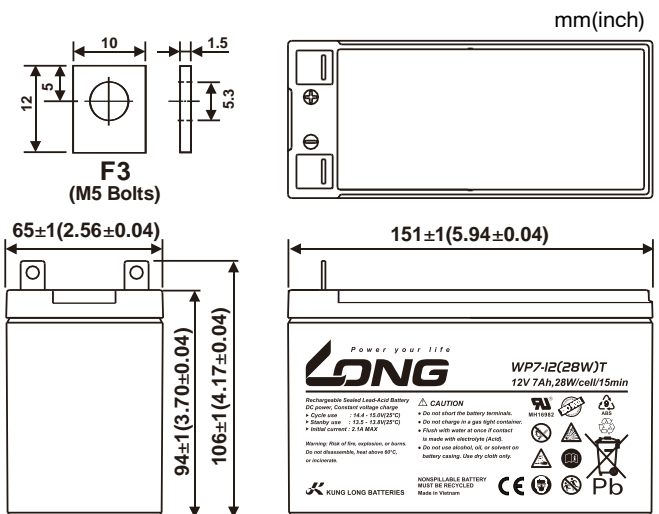
#### Terminal

F3

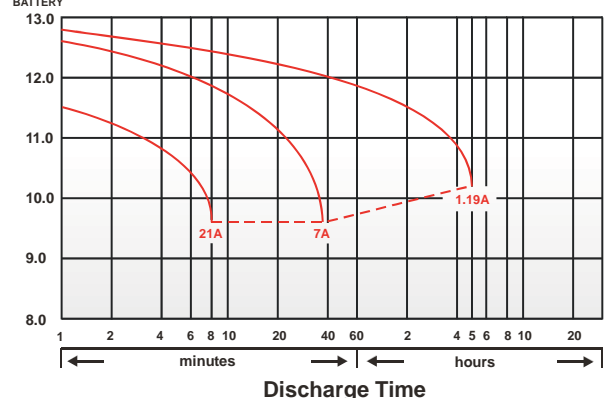


### Dimensions

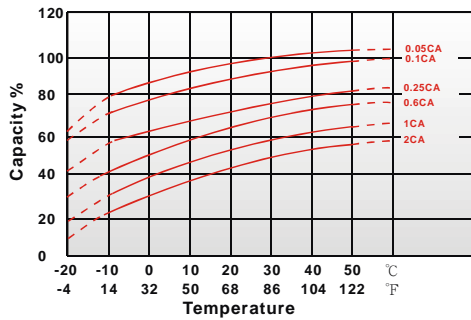
|                     |                   |
|---------------------|-------------------|
| Length (L)          | 151±1 (5.94±0.04) |
| Width (W)           | 65±1 (2.56±0.04)  |
| Height (H)          | 94±1 (3.70±0.04)  |
| Overall Height (HT) | 106±1 (4.17±0.04) |



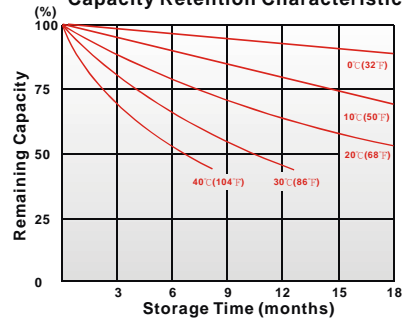
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



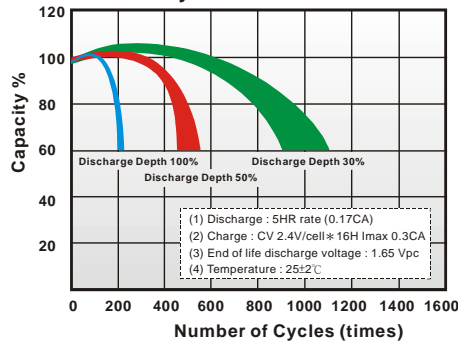
Effect of Temperature on Capacity 25°C (77°F)



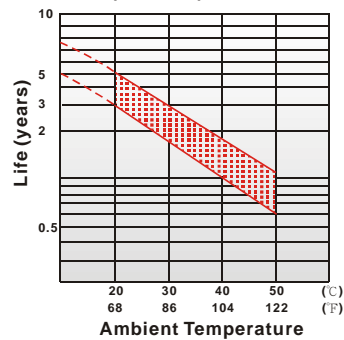
Capacity Retention Characteristic



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 | 43.8  | 47.0  | 49.0  | 51.0  | 51.8  | 52.8  | 54.3  |
| 10          | min | 30.0  | 31.8  | 33.2  | 34.3  | 34.8  | 35.5  | 36.5  |
| 15          | min | 24.0  | 25.2  | 25.8  | 26.5  | 26.8  | 27.3  | 28.0  |
| 30          | min | 12.1  | 12.9  | 13.6  | 14.1  | 14.3  | 14.4  | 14.6  |
| 60          | min | 7.70  | 8.38  | 8.63  | 8.87  | 8.97  | 9.08  | 9.23  |
| 120         | min | 4.10  | 4.52  | 4.72  | 4.92  | 4.98  | 5.07  | 5.20  |
| 180         | min | 3.08  | 3.32  | 3.48  | 3.62  | 3.67  | 3.72  | 3.80  |
| 240         | min | 2.85  | 2.93  | 3.00  | 3.05  | 3.07  | 3.10  | 3.15  |
| 300         | min | 2.47  | 2.53  | 2.58  | 2.62  | 2.63  | 2.65  | 2.68  |
| 600         | min | 1.36  | 1.40  | 1.42  | 1.43  | 1.44  | 1.44  | 1.45  |
| 1200        | min | 0.690 | 0.705 | 0.718 | 0.728 | 0.732 | 0.737 | 0.743 |

#### - 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 | 23.1  | 26.2  | 27.8  | 29.1  | 29.6  | 30.5  | 31.7  |
| 10          | min | 16.1  | 17.3  | 18.1  | 18.6  | 18.9  | 19.2  | 19.8  |
| 15          | min | 12.6  | 13.1  | 13.5  | 13.8  | 14.0  | 14.1  | 14.3  |
| 30          | min | 6.54  | 7.05  | 7.28  | 7.47  | 7.56  | 7.68  | 7.85  |
| 60          | min | 4.02  | 4.25  | 4.41  | 4.52  | 4.58  | 4.63  | 4.71  |
| 120         | min | 2.26  | 2.38  | 2.45  | 2.49  | 2.51  | 2.54  | 2.57  |
| 180         | min | 1.65  | 1.74  | 1.79  | 1.82  | 1.83  | 1.85  | 1.88  |
| 240         | min | 1.35  | 1.40  | 1.44  | 1.47  | 1.49  | 1.51  | 1.53  |
| 300         | min | 1.10  | 1.16  | 1.21  | 1.25  | 1.27  | 1.28  | 1.29  |
| 600         | min | 0.667 | 0.675 | 0.682 | 0.687 | 0.690 | 0.694 | 0.698 |
| 1200        | min | 0.339 | 0.346 | 0.350 | 0.353 | 0.355 | 0.357 | 0.359 |

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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