

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

|              |                   |         |
|--------------|-------------------|---------|
| 20 hour rate | (2.5A to 10.50V)  | 50Ah    |
| 10 hour rate | (4.75A to 10.50V) | 47.5Ah  |
| 5 hour rate  | (8.5A to 10.20V)  | 42.5Ah  |
| 1 C          | (50A to 9.60V)    | 28.33Ah |
| 3 C          | (150A to 9.60V)   | 20Ah    |

#### Weight

Approx. 15.1kg(33.2Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 5 mΩ

#### Maximum Discharge Current for

5 seconds: 600A

#### Charging Methods at 25°C(77°F)

|                            |                |
|----------------------------|----------------|
| Cycle use:                 |                |
| Charging Voltage           | 14.4 to 15.0V  |
| Coefficient                | -5.0mV/°C/cell |
| Maximum Charging Current : | 15A            |
| 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 | 98% |
| 3 month | 94% |
| 6 month | 85% |

#### Case Material

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

#### Design Life

3-5 Years.

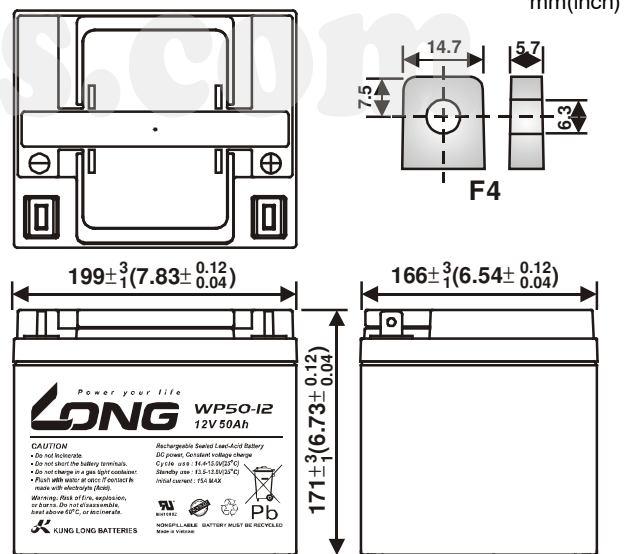
#### Terminal

F4

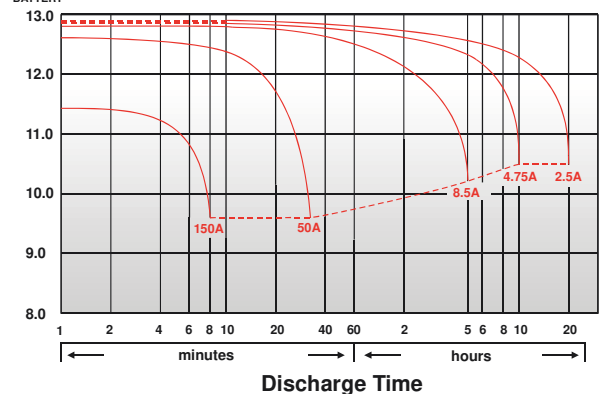


### ⚡ Dimensions

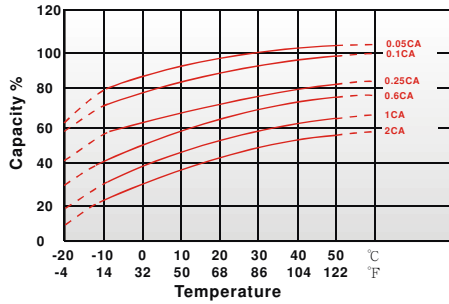
|                     |                          |
|---------------------|--------------------------|
| Length (L)          | 199+3-1 (7.83+0.12-0.04) |
| Width (W)           | 166+3-1 (6.54+0.12-0.04) |
| Height (H)          | 171+3-1 (6.73+0.12-0.04) |
| Overall Height (HT) | 171+3-1 (6.73+0.12-0.04) |



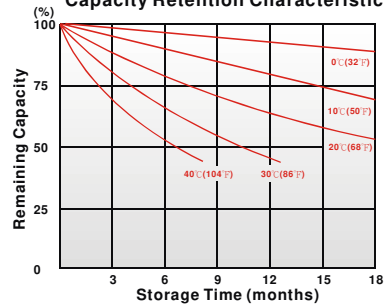
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



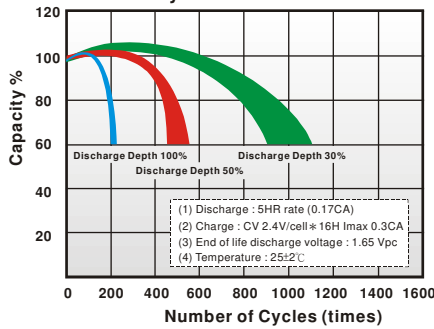
Effect of Temperature on Capacity 25°C(77°F)



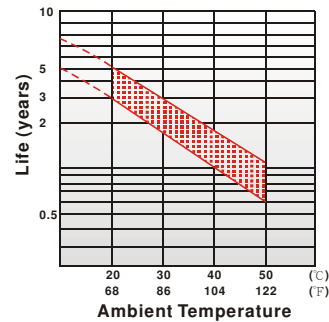
Capacity Retention Characteristic



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 | 240   | 288   | 322   | 345   | 350   | 356   | 361   |
| 10          | min | 171   | 203   | 223   | 233   | 237   | 241   | 246   |
| 15          | min | 126   | 146   | 160   | 167   | 170   | 172   | 175   |
| 30          | min | 78.0  | 89.8  | 97.2  | 100   | 102   | 103   | 104   |
| 60          | min | 53.7  | 56.5  | 58.2  | 59.5  | 60.0  | 60.7  | 61.2  |
| 120         | min | 29.2  | 32.0  | 33.3  | 34.5  | 34.8  | 35.3  | 35.8  |
| 180         | min | 20.8  | 22.7  | 23.8  | 24.7  | 25.0  | 25.3  | 25.7  |
| 240         | min | 17.2  | 18.3  | 19.0  | 19.7  | 19.8  | 20.2  | 20.5  |
| 300         | min | 15.9  | 16.6  | 17.0  | 17.3  | 17.5  | 17.7  | 17.8  |
| 600         | min | 8.62  | 9.10  | 9.38  | 9.57  | 9.62  | 9.68  | 9.77  |
| 1200        | min | 4.58  | 4.87  | 5.05  | 5.17  | 5.20  | 5.25  | 5.30  |

**- 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 | 139   | 166   | 185   | 199   | 206   | 210   | 214   |
| 10          | min | 88.5  | 106   | 117   | 125   | 128   | 131   | 134   |
| 15          | min | 77.8  | 84.5  | 87.6  | 90.2  | 90.9  | 91.8  | 92.9  |
| 30          | min | 45.4  | 50.7  | 52.8  | 54.4  | 54.9  | 55.5  | 56.2  |
| 60          | min | 26.0  | 28.8  | 29.9  | 30.6  | 30.8  | 31.1  | 31.4  |
| 120         | min | 15.1  | 16.2  | 16.8  | 17.3  | 17.5  | 17.7  | 17.9  |
| 180         | min | 11.0  | 11.7  | 12.1  | 12.4  | 12.5  | 12.6  | 12.7  |
| 240         | min | 8.96  | 9.44  | 9.70  | 9.89  | 9.96  | 10.1  | 10.2  |
| 300         | min | 7.85  | 8.26  | 8.50  | 8.67  | 8.73  | 8.80  | 8.87  |
| 600         | min | 4.41  | 4.65  | 4.76  | 4.82  | 4.84  | 4.87  | 4.91  |
| 1200        | min | 2.32  | 2.44  | 2.50  | 2.55  | 2.57  | 2.59  | 2.61  |

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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