

### ⚡ Specifications

#### Nominal Voltage(V)

12V

#### Nominal Capacity

|              |       |    |         |        |
|--------------|-------|----|---------|--------|
| 10 hour rate | (10A  | to | 10.80V) | 100Ah  |
| 5 hour rate  | (17A  | to | 10.20V) | 85Ah   |
| 1 hour rate  | (60A  | to | 9.60V)  | 60Ah   |
| 1 C          | (100A | to | 9.60V)  | 63.3Ah |

#### Weight

Approx. 34.5kg(75.9Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 5 mΩ

#### Maximum Discharge Current for

5 seconds: 1200A

#### Charging Methods at 25°C(77°F)

|                            |               |
|----------------------------|---------------|
| Cycle use:                 |               |
| Charging Voltage           | 14.4 to 15.0V |
| Coefficient -5.0mV/°C/cell |               |
| Maximum Charging Current : | 30A           |
| 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)



### ⚡ Dimensions

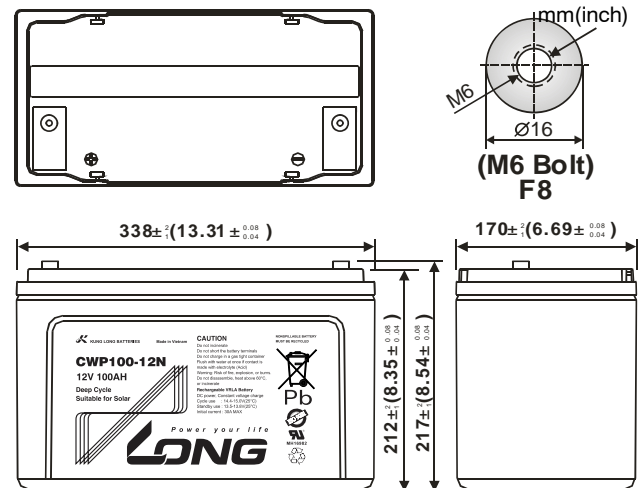
|                     |                          |
|---------------------|--------------------------|
| Length (L)          | 338+2-1(13.31+0.08-0.04) |
| Width (W)           | 170+2-1(6.69+0.08-0.04)  |
| Height (H)          | 212+2-1(8.35+0.08-0.04)  |
| Overall Height (HT) | 217+2-1(8.54+0.08-0.04)  |

#### Terminal

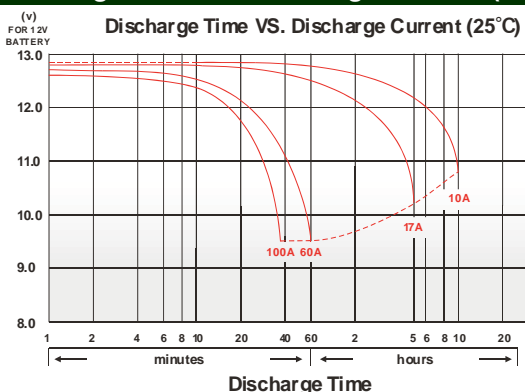
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#### Description of torque value of hard ware for the terminals:

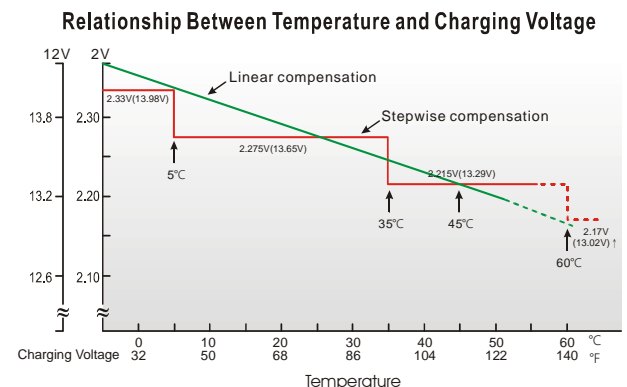
|                                |                        |
|--------------------------------|------------------------|
| Recommended torque value       | M6: 7 N-m (71 kgf-cm)  |
| Maximum allowable torque value | M6: 10 N-m (102kgf-cm) |



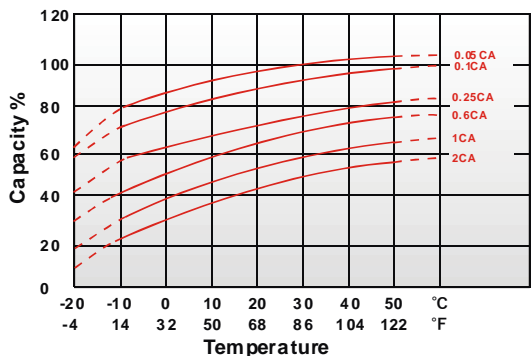
### Discharge Time VS. Discharge Current (25°C)



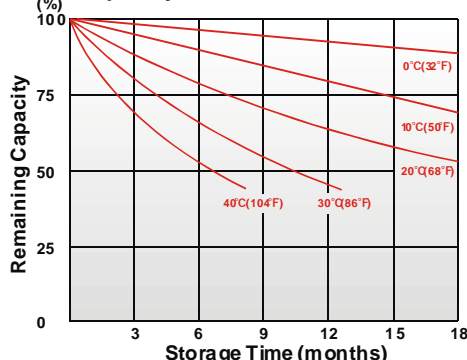
### Relationship Between Temperature and Charging Voltage



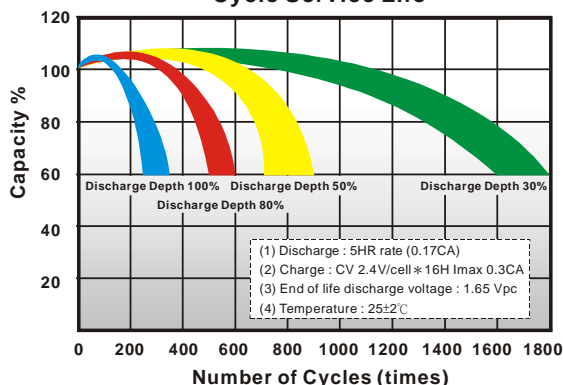
Effect of Temperature on Capacity 25°C (77°F)



Capacity Retention Characteristic



Cycle Service Life



**- PERFORMANCE DATA**

**Discharge Rates in Watts to Various End Voltages at 25°C(77°F)**

| Time | End Voltage | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| 10   | min         | 349   | 379   | 406   | 430   | 441   | 454   | 476   |
| 15   | min         | 278   | 300   | 319   | 337   | 347   | 355   | 369   |
| 30   | min         | 163   | 174   | 183   | 190   | 195   | 199   | 205   |
| 60   | min         | 113   | 117   | 120   | 123   | 124   | 125   | 127   |
| 120  | min         | 66.8  | 69.5  | 71.7  | 73.7  | 75.3  | 76.5  | 77.7  |
| 180  | min         | 47.3  | 49.3  | 51.3  | 53.2  | 54.3  | 55.2  | 55.8  |
| 240  | min         | 35.7  | 37.7  | 39.3  | 41.0  | 42.3  | 43.2  | 44.0  |
| 300  | min         | 31.5  | 32.7  | 33.7  | 34.5  | 35.3  | 36.0  | 36.8  |
| 600  | min         | 17.8  | 18.8  | 19.7  | 20.3  | 20.8  | 21.3  | 21.7  |
| 1200 | min         | 10.4  | 10.8  | 11.1  | 11.3  | 11.3  | 11.3  | 11.5  |

**- Discharge Rates in Amperes to Various End Voltages at 25°C(77°F)**

| Time | End Voltage | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|------|-------------|-------|-------|-------|-------|-------|-------|-------|
| 10   | min         | 167   | 195   | 216   | 233   | 240   | 249   | 264   |
| 15   | min         | 124   | 144   | 164   | 175   | 182   | 191   | 201   |
| 30   | min         | 74.9  | 83.6  | 93.9  | 102   | 107   | 111   | 115   |
| 60   | min         | 45.7  | 50.7  | 56.8  | 59.2  | 63.2  | 64.3  | 65.2  |
| 120  | min         | 27.1  | 29.8  | 32.9  | 35.8  | 38.2  | 40.3  | 42.1  |
| 180  | min         | 22.6  | 23.8  | 24.7  | 25.8  | 26.2  | 26.6  | 27.3  |
| 240  | min         | 18.4  | 19.2  | 19.9  | 20.4  | 20.7  | 21.2  | 21.7  |
| 300  | min         | 16.3  | 17.1  | 17.6  | 17.8  | 17.9  | 18.0  | 18.2  |
| 600  | min         | 9.72  | 10.1  | 10.3  | 10.5  | 10.6  | 10.7  | 10.8  |
| 1200 | min         | 5.10  | 5.27  | 5.39  | 5.47  | 5.54  | 5.59  | 5.63  |

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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