

⚡ Specifications

Nominal Voltage(V)

12V

Nominal Capacity

| | | | | |
|--------------|-------|----|---------|---------|
| 20 hour rate | (1A | to | 10.50V) | 20Ah |
| 10 hour rate | (1.9A | to | 10.50V) | 19Ah |
| 5 hour rate | (3.4A | to | 10.20V) | 17Ah |
| 1 C | (20A | to | 9.60V) | 11.33Ah |
| 3 C | (60A | to | 9.60V) | 8Ah |

Weight

Approx. 5.95kg(13.09Lbs.)

Internal Resistance (at 1KHz)

Approx. 10 mΩ

Maximum Discharge Current for

5 seconds: 300A

Charging Methods at 25°C(77°F)

| | |
|----------------------------|---------------|
| Cycle use: | |
| Charging Voltage | 14.4 to 15.0V |
| Coefficient -5.0mV/°C/cell | |
| Maximum Charging Current : | 6A |
| 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

F6

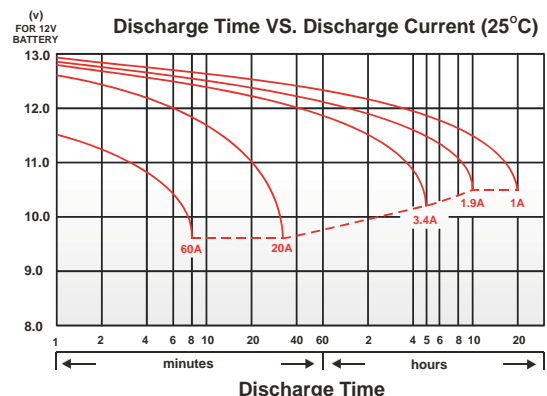
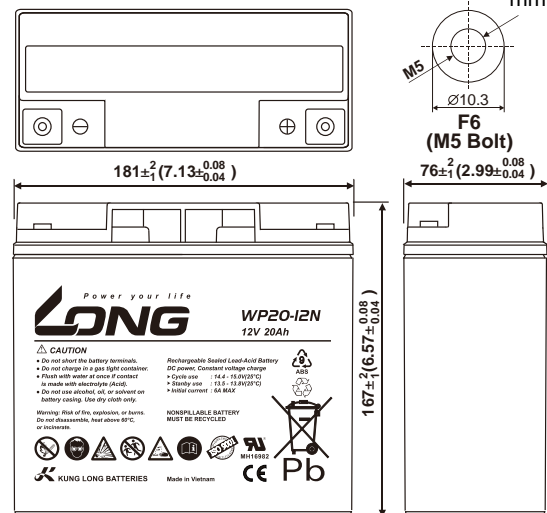


⚡ Dimensions

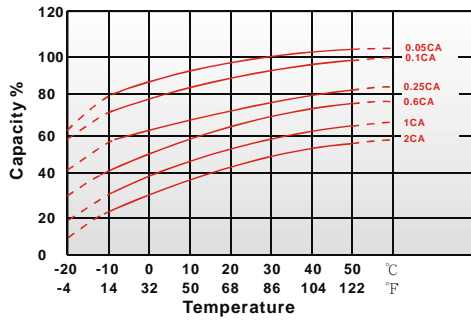
| | |
|---------------------|---------------------------------------|
| Length (L) | 181± ^{0.08} _{-0.04} |
| Width (W) | 76± ^{0.08} _{-0.04} |
| Height (H) | 167± ^{0.08} _{-0.04} |
| Overall Height (HT) | 167± ^{0.08} _{-0.04} |

Description of torque value of hard ware for the terminals:

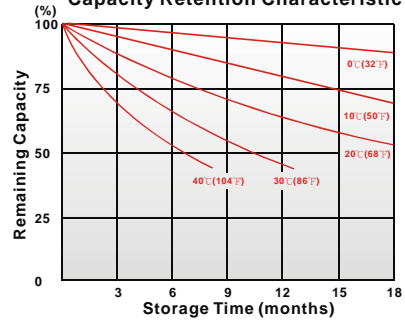
| | |
|--------------------------------|----------------------|
| Recommended torque value | M5: 4 N-m (41kgf-cm) |
| Maximum allowable torque value | M5: 6 N-m (61kgf-cm) |



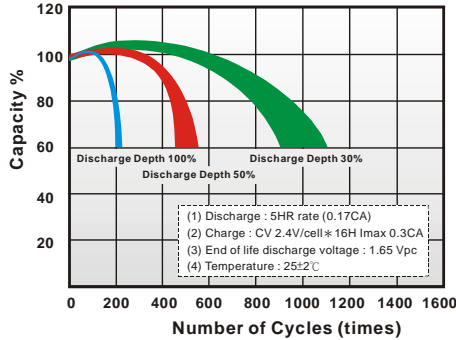
Effect of Temperature on Capacity 25°C (77°F)



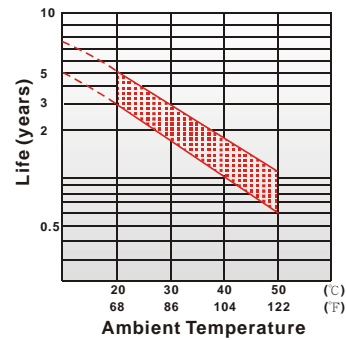
Capacity Retention Characteristic



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 | 110 | 128 | 139 | 146 | 148 | 150 | 152 |
| 10 | min | 78.7 | 88.8 | 96.2 | 101 | 102 | 103 | 105 |
| 15 | min | 68.2 | 75.5 | 80.4 | 83.5 | 84.3 | 85.2 | 85.9 |
| 30 | min | 35.5 | 37.9 | 40.6 | 42.2 | 42.7 | 43.1 | 43.6 |
| 60 | min | 22.2 | 23.2 | 24.0 | 24.7 | 24.8 | 25.2 | 25.5 |
| 120 | min | 12.2 | 12.7 | 13.0 | 13.5 | 13.6 | 13.7 | 13.8 |
| 180 | min | 9.53 | 9.88 | 10.1 | 10.3 | 10.4 | 10.5 | 10.6 |
| 240 | min | 7.63 | 7.93 | 8.12 | 8.27 | 8.32 | 8.38 | 8.46 |
| 300 | min | 6.65 | 6.88 | 7.00 | 7.10 | 7.13 | 7.18 | 7.24 |
| 600 | min | 3.87 | 3.98 | 4.07 | 4.13 | 4.15 | 4.19 | 4.22 |
| 1200 | min | 2.05 | 2.12 | 2.17 | 2.20 | 2.22 | 2.23 | 2.25 |

- 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 | 69.6 | 75.4 | 79.1 | 82.3 | 83.7 | 85.1 | 87.6 |
| 10 | min | 46.7 | 49.9 | 52.4 | 54.6 | 55.5 | 56.5 | 58.2 |
| 15 | min | 35.4 | 38.1 | 39.8 | 41.3 | 41.9 | 42.6 | 43.5 |
| 30 | min | 18.9 | 20.4 | 21.5 | 22.4 | 22.7 | 23.1 | 23.6 |
| 60 | min | 11.1 | 11.7 | 12.2 | 12.6 | 12.7 | 12.9 | 13.1 |
| 120 | min | 6.25 | 6.47 | 6.61 | 6.73 | 6.77 | 6.82 | 6.89 |
| 180 | min | 4.73 | 4.90 | 5.00 | 5.08 | 5.11 | 5.15 | 5.21 |
| 240 | min | 3.88 | 3.97 | 4.04 | 4.09 | 4.11 | 4.14 | 4.17 |
| 300 | min | 3.41 | 3.48 | 3.53 | 3.57 | 3.58 | 3.60 | 3.62 |
| 600 | min | 1.97 | 2.00 | 2.02 | 2.04 | 2.05 | 2.06 | 2.07 |
| 1200 | min | 1.00 | 1.03 | 1.05 | 1.07 | 1.08 | 1.09 | 1.10 |

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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