

⚡ Specifications

Nominal Voltage(V)

12V

Nominal Power

15 mins rate: 150W/cell to 1.67V/cell

Nominal Capacity

| | | | | |
|--------------|-------|----|---------|--------|
| 20 hour rate | (2.0A | to | 10.50V) | 40Ah |
| 8 hour rate | (4.6A | to | 10.50V) | 36.8Ah |
| 5 hour rate | (6.8A | to | 10.20V) | 34Ah |

Weight

Approx. 13.5kg(29.7Lbs.)

Internal Resistance (at 1KHz)

Approx. 7.5 mΩ

Maximum Discharge Current for

5 seconds: 480A

Short Circuit Current (A) IEC 60896-21-22

2400 A

Charging Methods at 25°C(77°F)

| | |
|----------------------------|----------------|
| Maximum Charging Current : | 12A |
| Boost Charging Voltage | 14.4 to 15.0V |
| Boost Charge Time | 8-9Hr |
| 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 | 96% |
| 6 month | 94% |

Case Material

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

Battery Construction

| Component | Positive Plate | Negative plate | Safety valve | Terminal | Separator | Electrolyte |
|--------------|----------------|----------------|--------------|----------|-----------|---------------|
| Raw material | Lead dioxide | Lead | Rubber | Lead | AGM | Sulfuric acid |



⚡ Dimensions

Length (L)

197.7±₁²(7.78±_{0.04}^{0.08})

Width (W)

166±₁²(6.54±_{0.04}^{0.08})

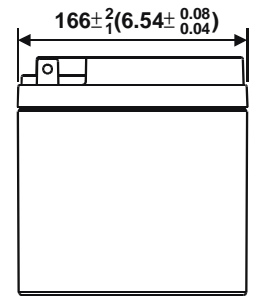
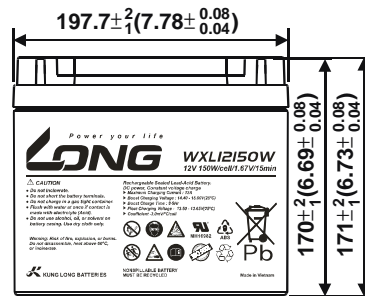
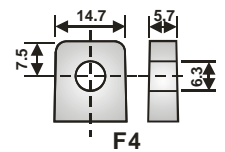
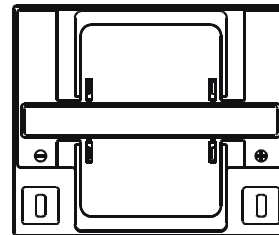
Height (H)

171±₁²(6.73±_{0.04}^{0.08})

Overall Height (HT)

171±₁²(6.73±_{0.04}^{0.08})

mm(inch)



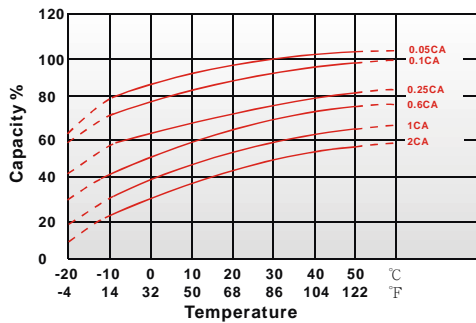
Terminal

F4

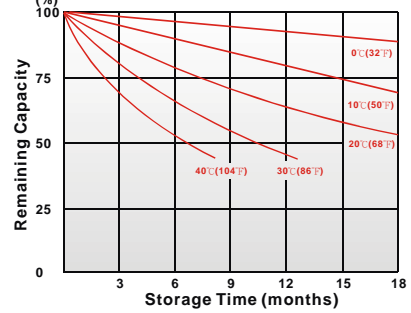
Design Life

Expected Trickle Design Life: 6-9 years at 20°C according to Eurobat.

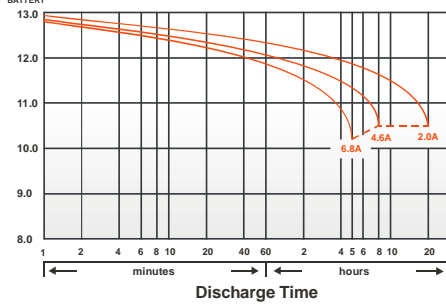
Effect of Temperature on Capacity 25°C(77°F)



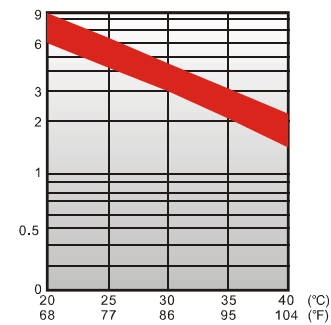
Capacity Retention Characteristic



Discharge Time VS. Discharge Current (25°C)



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 | 204 | 215 | 227 | 230 | 232 | 235 | 237 |
| 10 | min | 166 | 178 | 196 | 198 | 200 | 203 | 205 |
| 15 | min | 141 | 147 | 154 | 157 | 160 | 161 | 162 |
| 20 | min | 111 | 116 | 122 | 123 | 123 | 124 | 125 |
| 30 | min | 83.9 | 87.0 | 90.8 | 92.0 | 93.1 | 93.8 | 94.5 |
| 45 | min | 65.0 | 69.9 | 73.1 | 75.9 | 77.5 | 78.1 | 78.5 |
| 60 | min | 54.8 | 55.7 | 56.8 | 58.0 | 59.3 | 60.0 | 60.8 |
| 90 | min | 41.4 | 41.7 | 42.4 | 43.3 | 44.5 | 44.6 | 44.9 |
| 120 | min | 32.5 | 32.8 | 33.6 | 33.8 | 34.0 | 34.1 | 34.3 |
| 180 | min | 22.8 | 23.0 | 23.4 | 23.6 | 23.8 | 23.9 | 24.1 |
| 240 | min | 17.3 | 17.6 | 17.9 | 18.3 | 18.4 | 18.6 | 19.0 |
| 300 | min | 14.4 | 15.0 | 15.2 | 15.3 | 15.4 | 15.4 | 15.5 |
| 480 | min | 9.46 | 9.67 | 9.89 | 9.94 | 10.0 | 10.0 | 10.1 |
| 1200 | min | 3.51 | 3.70 | 3.89 | 4.01 | 4.11 | 4.19 | 4.30 |

- 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 | 113 | 121 | 126 | 127 | 129 | 130 | 133 |
| 10 | min | 95.0 | 101 | 104 | 106 | 107 | 107 | 108 |
| 15 | min | 69.0 | 73.5 | 79.1 | 80.0 | 81.0 | 82.0 | 82.9 |
| 20 | min | 57.8 | 59.7 | 62.1 | 62.4 | 62.9 | 63.4 | 63.9 |
| 30 | min | 42.9 | 44.7 | 46.6 | 47.0 | 47.4 | 47.9 | 48.5 |
| 45 | min | 33.4 | 36.2 | 37.8 | 38.9 | 39.6 | 39.9 | 40.2 |
| 60 | min | 29.7 | 30.2 | 30.9 | 31.3 | 31.8 | 32.2 | 32.8 |
| 90 | min | 20.7 | 21.0 | 21.4 | 21.6 | 21.8 | 22.0 | 22.3 |
| 120 | min | 16.8 | 16.9 | 17.0 | 17.1 | 17.2 | 17.3 | 17.4 |
| 180 | min | 11.3 | 11.4 | 11.6 | 11.7 | 11.8 | 11.9 | 12.1 |
| 240 | min | 8.75 | 8.84 | 9.03 | 9.13 | 9.22 | 9.32 | 9.37 |
| 300 | min | 7.33 | 7.50 | 7.61 | 7.65 | 7.67 | 7.69 | 7.75 |
| 480 | min | 4.74 | 4.79 | 4.88 | 4.90 | 4.91 | 4.92 | 4.95 |
| 1200 | min | 2.12 | 2.14 | 2.25 | 2.26 | 2.27 | 2.28 | 2.28 |

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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