

UXL60-12



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Physical Specification

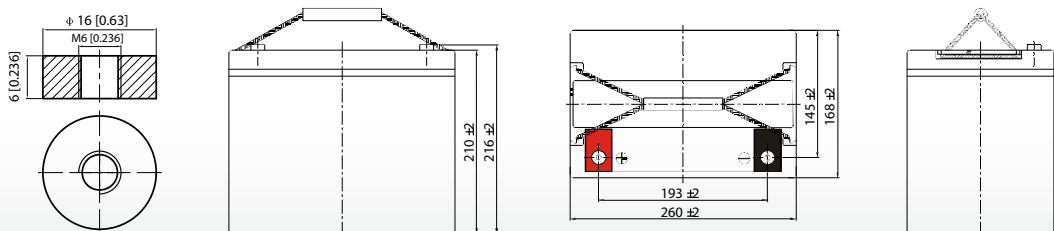
| | |
|-------------------------------|----------------------------|
| Part Number: | UXL60-12 |
| Length: | 260 ± 3 mm (10.24 inches) |
| Width: | 168 ± 3 mm (6.61 inches) |
| Container Height: | 210 ± 3 mm (8.26 inches) |
| Total Height (with terminal): | 216 ± 3 mm (8.50 inches) |
| Approx Weight: | Approx 21 Kg |

Specifications

| | | |
|----------------------------------|--|--|
| | Nominal Voltage | 12V |
| | Nominal Capacity (10HR) | 60AH |
| Terminal Type | Standard Terminal | F6 |
| | Optional Terminal | F9 / F14 |
| Container Material | Standard Option | ABS |
| | Flame Retardant Option (FR) | ABS (UL94:VO) |
| Rated Capacity | 64.2 AH/3.21A | (20hr,1.80V/cell, 25°C / 77°F) |
| | 60.0 AH/6.0A | (10hr,1.80V/cell, 25°C / 77°F) |
| | 52.2 AH/10.44A | (5hr,1.75V/cell, 25°C / 77°F) |
| | 46.8 AH/15.6A | (3hr,1.75V/cell, 25°C / 77°F) |
| | 37.2 AH/37.2A | (1hr,1.60V/cell, 25°C / 77°F) |
| Max Discharge Current | 720 A (5s) | |
| Internal Resistance | Approx 7.4mΩ | |
| Discharge Characteristics | Operating Temp. Range | Discharge: -15 ~ 50°C (5 ~ 122°F) |
| | | Charge: 0 ~ 40°C (32 ~ 104°F) |
| | | Storage: -15 ~ 40°C (5 ~ 104°F) |
| | Nominal Operating Temp. Range | 25 ± 3°C (77 ± 5°F) |
| | Cycle Use | Initial Charging Current less than 18.0A. Voltage 14.4V ~ 15.0V at 25°C (77°F) Temp. Coe fficient -30mV/°C |
| | Standby Use | No limit on Initial Charging Current Voltage 13.5V ~ 13.8V at 25°C (77°F) Temp. Coe fficient -20mV/°C |
| Capacity affected by Temperature | 40°C (104°F) | 103% |
| | 25°C (77°F) | 100% |
| | 0°C (32°F) | 86% |
| Design Floating Life at 20°C | 15 Years | |
| Self Discharge | Ultracell batteries may be stored for up to 6 months at 25°C(°77F) and then a refresh charge is required. For higher temperatures the time interval will be shorter. | |

Dimensions

F6 Terminal



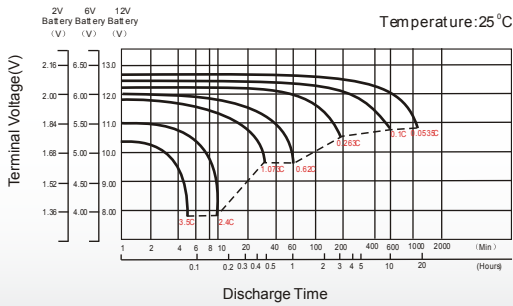
Constant Current Discharge (Amperes) at 25 °C (77°F)

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 70.2 | 59.0 | 52.4 | 43.4 | 33.5 | 28.7 | 18.6 | 14.0 | 11.4 | 9.62 | 8.43 | 6.76 | 5.81 | 3.10 |
| 1.80V/cell | 80.3 | 66.3 | 57.9 | 47.2 | 36.2 | 30.3 | 20.0 | 15.0 | 12.2 | 10.2 | 8.93 | 7.12 | 6.00 | 3.21 |
| 1.75V/cell | 91.2 | 74.7 | 64.0 | 51.3 | 39.4 | 33.0 | 20.8 | 15.6 | 12.6 | 10.4 | 9.21 | 7.36 | 6.16 | 3.29 |
| 1.70V/cell | 103.0 | 82.9 | 70.6 | 56.0 | 42.5 | 34.9 | 21.9 | 16.4 | 13.1 | 11.0 | 9.65 | 7.67 | 6.40 | 3.38 |
| 1.65V/cell | 110.7 | 88.8 | 75.2 | 59.1 | 45.0 | 36.1 | 22.7 | 17.1 | 13.7 | 11.4 | 9.99 | 7.93 | 6.58 | 3.48 |
| 1.60V/cell | 121.7 | 97.2 | 81.6 | 63.0 | 46.7 | 37.2 | 23.3 | 17.5 | 14.0 | 11.7 | 10.2 | 8.06 | 6.72 | 3.54 |

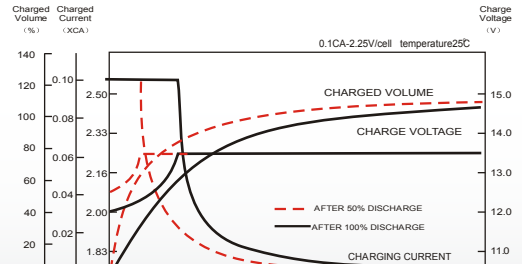
Constant Power Discharge (Watts) at 25 °C (77°F)

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 131.1 | 111.3 | 99.8 | 83.7 | 65.1 | 55.9 | 36.4 | 27.5 | 22.6 | 19.1 | 16.7 | 13.5 | 11.6 | 6.21 |
| 1.80V/cell | 148.2 | 123.4 | 108.7 | 89.5 | 69.7 | 58.7 | 38.9 | 29.4 | 23.9 | 20.1 | 17.7 | 14.2 | 12.0 | 6.41 |
| 1.75V/cell | 165.7 | 137.4 | 119.0 | 96.5 | 75.3 | 63.7 | 40.3 | 30.4 | 24.6 | 20.5 | 18.2 | 14.6 | 12.3 | 6.57 |
| 1.70V/cell | 182.9 | 150.3 | 130.4 | 104.7 | 80.8 | 67.2 | 42.4 | 32.0 | 25.7 | 21.7 | 19.0 | 15.2 | 12.7 | 6.73 |
| 1.65V/cell | 194.7 | 159.7 | 137.7 | 109.6 | 84.7 | 69.0 | 43.7 | 33.1 | 26.6 | 22.3 | 19.6 | 15.7 | 13.1 | 6.93 |
| 1.60V/cell | 209.3 | 172.1 | 148.0 | 116.2 | 87.6 | 70.7 | 44.6 | 33.8 | 27.1 | 22.7 | 20.0 | 15.9 | 13.3 | 7.03 |

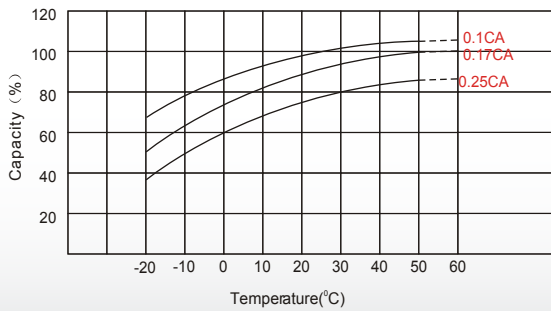
Discharge Characteristics



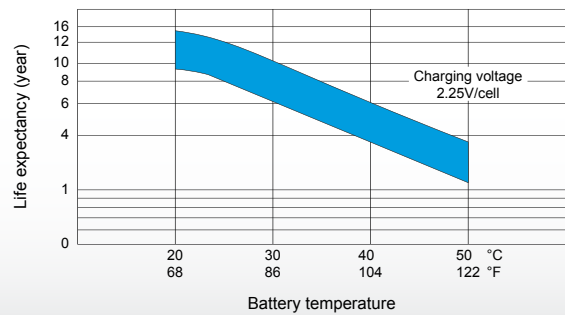
Float Charging Characteristics



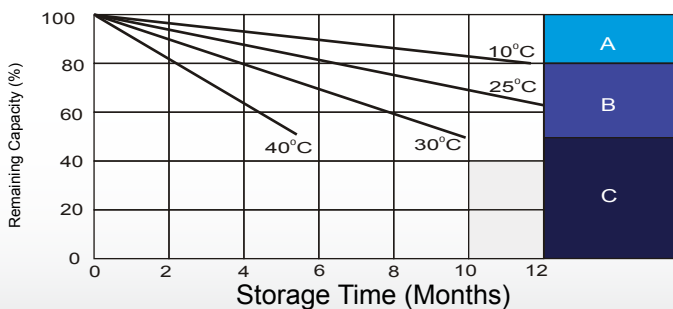
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Self Discharge Characteristics



A

B

C

No supplementary required
(Carryout supplementary charge before use if 100% capacity is required.)

Supplementary charge required before use. Optional charging way as below:
 1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
 2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.25V/cell.
 3. Charged for 8 ~ 10 hours at limited current 0.05 CA.

Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.