

UXL40-12



Physical Specification

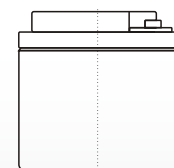
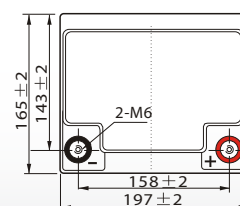
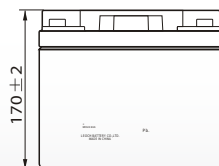
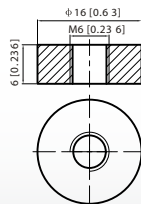
| | |
|-------------------------------|---------------------------------|
| Part Number: | UXL40-12 |
| Length: | 197 ± 3 mm (7.76 inches) |
| Width: | 165 ± 3 mm (6.50 inches) |
| Container Height: | 171 ± 3 mm (6.69 inches) |
| Total Height (with terminal): | 171 ± 3 mm (6.69 inches) |
| Approx Weight: | Approx 14Kg |

Specifications

| | | |
|----------------------------------|--|---|
| | Nominal Voltage | 12V |
| | Nominal Capacity (10HR) | 40AH |
| Terminal Type | Standard Terminal | F6 |
| | Optional Terminal | F10 / F12 |
| Container Material | Standard Option | ABS |
| | Flame Retardant Option (FR) | ABS (UL94:VO) |
| Rated Capacity | 42.4 AH/2.03A | (20hr, 1.80V/cell, 25°C / 77°F) |
| | 40.0 AH/3.80A | (10hr, 1.80V/cell, 25°C / 77°F) |
| | 33.1 AH/6.61A | (5hr, 1.75V/cell, 25°C / 77°F) |
| | 29.6 AH/9.88A | (3hr, 1.75V/cell, 25°C / 77°F) |
| | 23.56 AH/23.56A | (1hr, 1.60V/cell, 25°C / 77°F) |
| Max Discharge Current | 456A (5s) | |
| Internal Resistance | Approx 7.5mΩ | |
| 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 11.4A. Voltage 14.4V ~ 15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C |
| | Standby Use | No limit on Initial Charging Current Voltage 13.5V ~ 13.8V at 25°C (77°F) Temp. Coefficient -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(77°F) and then a refresh charge is required. For higher temperatures the time interval will be shorter. | |

Dimensions

F6 Terminal



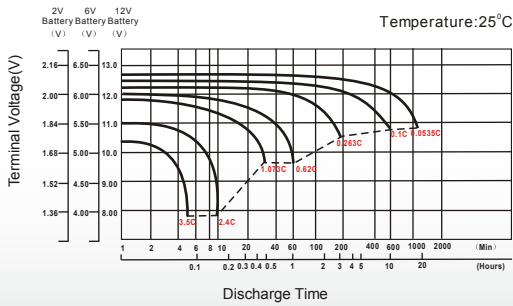
Constant Current Discharge (Amperes) at 25 °C (77°F)

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 44.5 | 37.4 | 33.2 | 27.5 | 21.2 | 18.2 | 11.8 | 8.84 | 7.24 | 6.09 | 5.34 | 4.28 | 3.68 | 1.96 |
| 1.80V/cell | 50.9 | 42.0 | 36.7 | 29.9 | 22.9 | 19.2 | 12.6 | 9.50 | 7.70 | 6.46 | 5.66 | 4.51 | 3.80 | 2.03 |
| 1.75V/cell | 57.8 | 47.3 | 40.5 | 32.5 | 25.0 | 20.9 | 13.1 | 9.88 | 7.97 | 6.61 | 5.83 | 4.66 | 3.90 | 2.08 |
| 1.70V/cell | 65.3 | 52.5 | 44.7 | 35.5 | 26.9 | 22.1 | 13.9 | 10.4 | 8.32 | 6.99 | 6.11 | 4.85 | 4.05 | 2.14 |
| 1.65V/cell | 70.1 | 56.2 | 47.6 | 37.4 | 28.5 | 22.9 | 14.4 | 10.8 | 8.65 | 7.21 | 6.33 | 5.02 | 4.17 | 2.20 |
| 1.60V/cell | 77.1 | 61.6 | 51.7 | 39.9 | 29.6 | 23.6 | 14.7 | 11.1 | 8.84 | 7.39 | 6.46 | 5.11 | 4.25 | 2.24 |

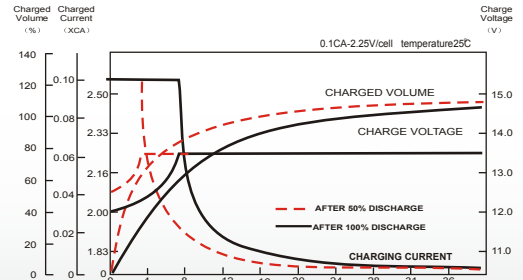
Constant Power Discharge (Watts) at 25 °C (77°F)

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 83.0 | 70.5 | 63.2 | 53.0 | 41.2 | 35.4 | 23.1 | 17.4 | 14.3 | 12.1 | 10.6 | 8.54 | 7.36 | 3.93 |
| 1.80V/cell | 93.9 | 78.1 | 68.9 | 56.7 | 44.1 | 37.2 | 24.6 | 18.6 | 15.1 | 12.7 | 11.2 | 8.96 | 7.58 | 4.06 |
| 1.75V/cell | 104.9 | 87.0 | 75.4 | 61.1 | 47.7 | 40.3 | 25.5 | 19.3 | 15.6 | 13.0 | 11.5 | 9.24 | 7.78 | 4.16 |
| 1.70V/cell | 115.9 | 95.2 | 82.6 | 66.3 | 51.2 | 42.5 | 26.8 | 20.2 | 16.3 | 13.7 | 12.0 | 9.62 | 8.07 | 4.26 |
| 1.65V/cell | 123.3 | 101.1 | 87.2 | 69.4 | 53.7 | 43.7 | 27.7 | 21.0 | 16.8 | 14.1 | 12.4 | 9.92 | 8.29 | 4.39 |
| 1.60V/cell | 132.6 | 109.0 | 93.7 | 73.6 | 55.5 | 44.8 | 28.2 | 21.4 | 17.2 | 14.4 | 12.6 | 10.1 | 8.45 | 4.45 |

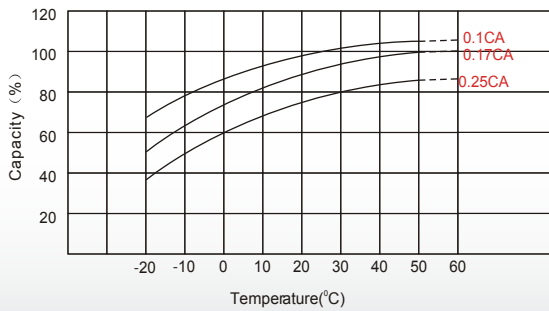
Discharge Characteristics



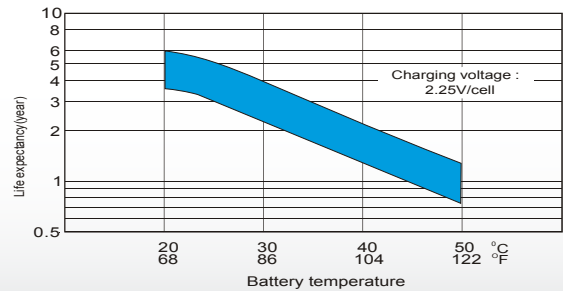
Float Charging Characteristics



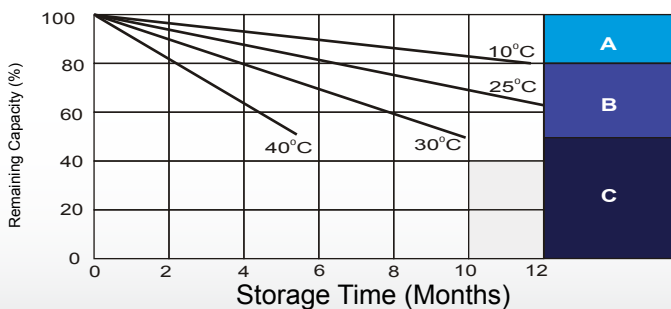
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Self Discharge Characteristics



A

B

C

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

B 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.

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