

UCG 45-12

12V 45AH

Deep Cycle Gel

Ultracell®

'Quality in Every Language'

UCG45-12



Physical Specification

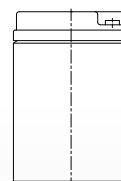
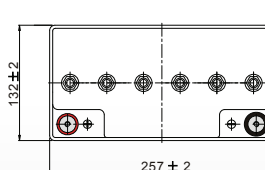
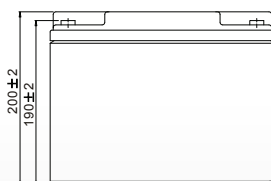
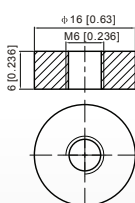
| | |
|-------------------------------|----------------------|
| Part Number: | UCG45-12 |
| Length: | 197 ± 2 mm |
| Width: | 165 ± 2 mm |
| Container Height: | 170 ± 2 mm |
| Total Height (with terminal): | 170 ± 2 mm |
| Approx Weight: | Approx 15.5kg |

Specifications

| | | |
|-------------------------------------|--|---|
| | Normal Voltage | 12V |
| | Normal Capacity (20HR) | 45.0AH |
| Terminal Type | Standard Terminal | F6 |
| | Optional Terminal | - |
| Container Material | Standard Option | ABS |
| | Flame Retardant Option (FR) | UL94:VO |
| Rated Capacity | 46.8 AH/2.25A | (20hr, 1.80V/cell, 25°C / 77°F) |
| | 45.0 AH/4.0A | (10hr, 1.75V/cell, 25°C / 77°F) |
| | 36.0 AH/7.2A | (5hr, 1.75V/cell, 25°C / 77°F) |
| | 31.2 AH/10.4A | (3hr, 1.75V/cell, 25°C / 77°F) |
| | 24.8 AH/24.8A | (1hr, 1.67V/cell, 25°C / 77°F) |
| Max Discharge Current | 450A (5s) | |
| Internal Resistance | Approx 9.6mΩ | |
| Discharge Characteristics | Operating Temp. Range | Discharge: -20 ~ 55°C (-4 ~ 131°F) |
| | | Charge: 0 ~ 40°C (32 ~ 104°F) |
| | | Storage: -20 ~ 50°C (-4 ~ 122°F) |
| | Nominal Operating Temp. Range | 25 ± 3°C (77 ± 5°F) |
| | Cycle Use | Initial Charging Current less than 11.25A 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 | 12 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



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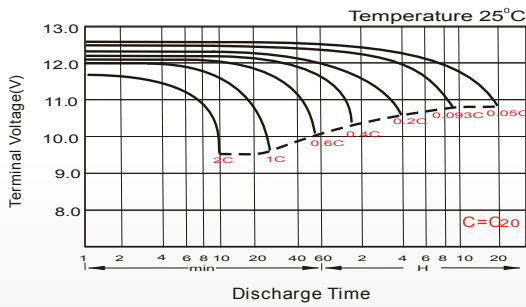
Constant Current Discharge (Amperes) at 25°C (77°F)

| F.V/Time | 20 min | 30 min | 45 min | 1h | 2h | 3h | 4h | 5h | 6h | 7h | 8h | 9h | 10h | 20h |
|------------|--------|--------|--------|------|------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 38.1 | 29.9 | 22.8 | 19.1 | 12.1 | 9.23 | 7.64 | 6.60 | 5.69 | 5.04 | 4.55 | 4.16 | 3.75 | 2.16 |
| 1.80V/cell | 43.6 | 33.4 | 25.1 | 21.1 | 13.1 | 9.89 | 8.10 | 6.93 | 5.98 | 5.28 | 4.76 | 4.37 | 3.92 | 2.25 |
| 1.75V/cell | 49.0 | 36.7 | 27.2 | 22.5 | 13.9 | 10.4 | 8.48 | 7.20 | 6.19 | 5.46 | 4.92 | 4.50 | 4.00 | 2.30 |
| 1.70V/cell | 52.8 | 39.3 | 28.9 | 23.9 | 14.7 | 10.9 | 8.76 | 7.43 | 6.41 | 5.64 | 5.06 | 4.62 | 4.09 | 2.32 |
| 1.67V/cell | 54.9 | 40.9 | 29.9 | 24.8 | 15.1 | 11.2 | 8.98 | 7.58 | 6.51 | 5.73 | 5.14 | 4.68 | 4.14 | 2.35 |
| 1.60V/cell | 59.5 | 43.7 | 32.1 | 26.3 | 15.7 | 11.7 | 9.32 | 7.81 | 6.67 | 5.85 | 5.23 | 4.78 | 4.22 | 2.38 |

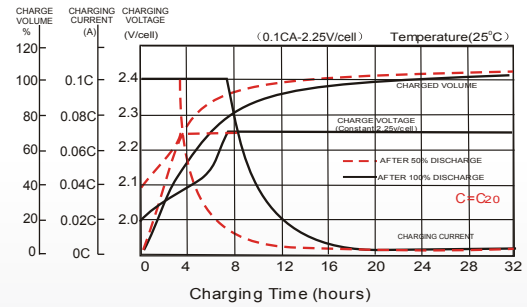
Constant Power Discharge (Watts) at 25°C (77°F)

| F.V/Time | 20 min | 30 min | 45 min | 1h | 2h | 3h | 4h | 5h | 6h | 7h | 8h | 9h | 10h | 20h |
|------------|--------|--------|--------|------|------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 72.9 | 57.6 | 44.2 | 37.1 | 23.7 | 18.1 | 15.0 | 13.0 | 11.3 | 10.0 | 9.04 | 8.28 | 7.49 | 4.31 |
| 1.80V/cell | 82.4 | 63.7 | 48.4 | 40.8 | 25.5 | 19.3 | 15.9 | 13.6 | 11.8 | 10.4 | 9.45 | 8.68 | 7.80 | 4.48 |
| 1.75V/cell | 91.5 | 69.5 | 51.9 | 43.4 | 26.9 | 20.3 | 16.6 | 14.1 | 12.2 | 10.8 | 9.73 | 8.93 | 7.95 | 4.57 |
| 1.70V/cell | 97.5 | 73.7 | 54.7 | 45.7 | 28.4 | 21.1 | 17.1 | 14.5 | 12.6 | 11.1 | 10.0 | 9.16 | 8.13 | 4.62 |
| 1.67V/cell | 100.4 | 75.8 | 56.3 | 47.1 | 29.0 | 21.7 | 17.4 | 14.8 | 12.7 | 11.3 | 10.1 | 9.26 | 8.21 | 4.66 |
| 1.60V/cell | 107.6 | 80.4 | 60.0 | 49.8 | 30.0 | 22.5 | 18.0 | 15.2 | 13.0 | 11.5 | 10.3 | 9.44 | 8.36 | 4.72 |

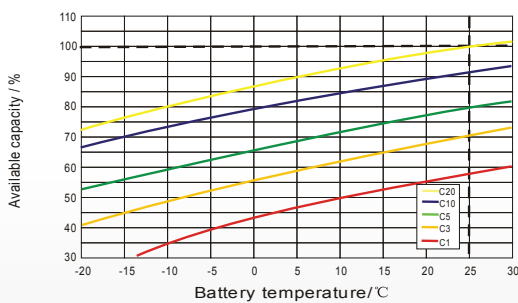
Discharge Characteristics



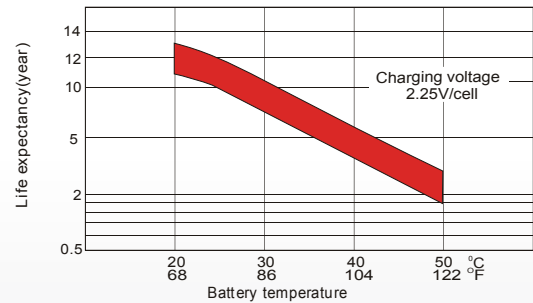
Float Charging Characteristics



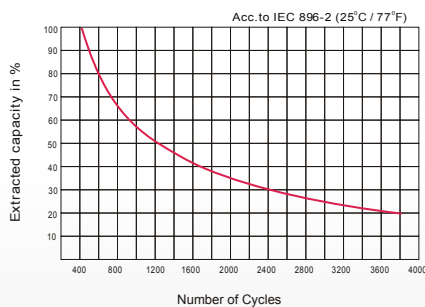
Temperature Effects in Relation to Battery Capacity



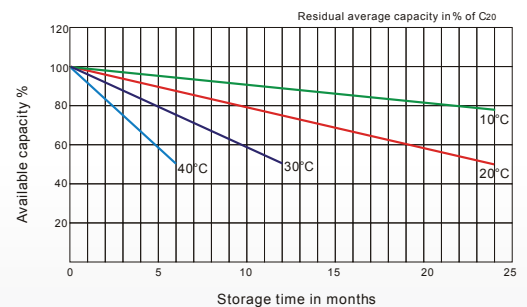
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



General Relation of Capacity VS. Storage Time



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