

UP-ST450-2



| Specification | | |
|-------------------------------------|--|-------------------------------|
| Nominal Voltage | 2V | |
| Nominal Capacity (10HR) | 450.0AH | |
| Dimension | Length | 210±3mm (8.27 inches) |
| | Width | 175±2mm (6.89 inches) |
| | Container Height | 330±3mm (12.99 inches) |
| | Total Height (with Terminal) | 350±3mm (13.78 inches) |
| | Approx Weight | Approx 27.0kg (59.5lbs) |
| Terminal | T11 | |
| Container Material | ABS | |
| Rated Capacity | 472.0AH/23.6A | (20hr, 1.80V/cell, 25°C/77°F) |
| | 450.0AH/45.0A | (10hr, 1.80V/cell, 25°C/77°F) |
| | 391.5AH/78.3A | (5hr, 1.75V/cell, 25°C/77°F) |
| | 340.2AH/113.4A | (3hr, 1.75V/cell, 25°C/77°F) |
| | 273.2AH/273.2A | (1hr, 1.60V/cell, 25°C/77°F) |
| Max. Discharge Current | 3600A (5s) | |
| Internal Resistance | Approx 0.65mΩ | |
| Operating Temperature Range | Discharge: | -15~50°C (5~122°F) |
| | Charge : | 0~40°C (32~104°F) |
| | Storage : | -15~40°C (5~104°F) |
| Nominal Operating Temperature Range | 25±3°C (77±5°F) | |
| Cycle Use | Initial Charging Current less than 135.0A.Voltage. 2.4V~2.5.0V at 25°C (77°F) Temp. Coefficient -5mV/°C | |
| Standby Use | No limit on Initial Charging Current Voltage. 2.25V~2.3V at 25°C (77°F) Temp. Coefficient -3mV/°C | |
| Capacity affected by Temperature | 40°C (104°F) | 103% |
| | 25°C (77°F) | 100% |
| | 0°C (32°F) | 86% |
| Self Discharge | Batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. | |

| Constant Current Discharge (Amperes) at 25°C (77°F) | | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|
| F.V/Time | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
| 1.85V/cell | 463.5 | 417.2 | 345.1 | 273.6 | 224.6 | 134.9 | 104.3 | 85.6 | 72.9 | 63.7 | 51.3 | 43.0 | 22.8 |
| 1.80V/cell | 526.5 | 464.4 | 370.2 | 287.9 | 238.5 | 142.3 | 109.4 | 89.4 | 76.0 | 66.5 | 53.3 | 45.0 | 23.6 |
| 1.75V/cell | 578.4 | 500.6 | 392.1 | 302.7 | 248.9 | 148.2 | 113.4 | 92.5 | 78.3 | 68.1 | 54.3 | 45.5 | 23.9 |
| 1.70V/cell | 617.4 | 535.3 | 411.4 | 314.1 | 257.6 | 152.6 | 116.4 | 94.5 | 79.7 | 69.3 | 55.1 | 45.9 | 24.1 |
| 1.65V/cell | 650.8 | 561.8 | 431.5 | 327.8 | 266.9 | 157.1 | 119.0 | 96.5 | 81.4 | 70.5 | 55.9 | 46.5 | 24.4 |
| 1.60V/cell | 682.3 | 582.6 | 446.4 | 336.6 | 273.2 | 160.9 | 121.5 | 97.9 | 82.5 | 71.5 | 56.6 | 47.0 | 24.7 |

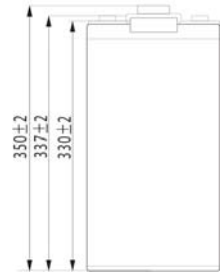
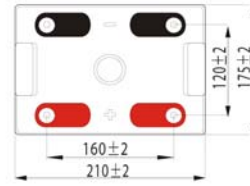
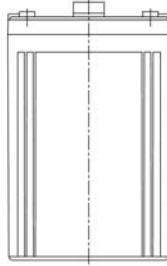
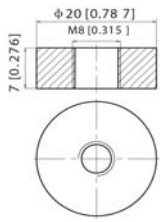
| Constant Power Discharge (Watts) at 25°C (77°F) | | | | | | | | | | | | | |
|---|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| F.V/Time | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
| 1.85V/cell | 877.6 | 793.4 | 659.4 | 526.1 | 434.3 | 262.4 | 203.7 | 167.9 | 143.6 | 125.8 | 101.8 | 85.5 | 45.4 |
| 1.80V/cell | 984.1 | 874.1 | 701.9 | 549.8 | 458.8 | 275.5 | 212.7 | 174.8 | 149.0 | 130.9 | 105.4 | 89.4 | 47.0 |
| 1.75V/cell | 1065.8 | 931.3 | 737.6 | 574.7 | 476.5 | 285.7 | 220.0 | 180.1 | 153.0 | 133.6 | 107.1 | 90.2 | 47.4 |
| 1.70V/cell | 1126.0 | 987.5 | 767.4 | 592.2 | 490.6 | 292.9 | 225.0 | 183.3 | 155.2 | 135.8 | 108.7 | 91.0 | 47.8 |
| 1.65V/cell | 1172.0 | 1025.1 | 799.0 | 614.5 | 505.4 | 300.4 | 228.9 | 186.6 | 158.0 | 137.7 | 110.0 | 92.0 | 48.4 |
| 1.60V/cell | 1208.4 | 1051.0 | 818.3 | 625.2 | 513.8 | 305.7 | 232.6 | 188.4 | 159.6 | 139.2 | 111.2 | 92.9 | 48.9 |



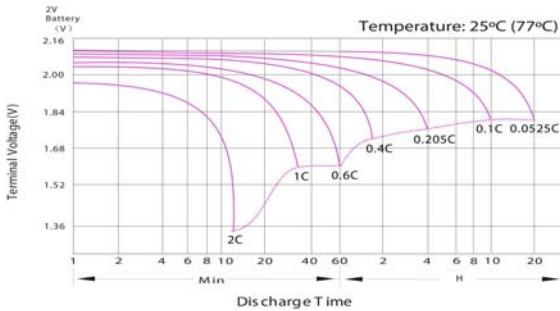
UP-ST450-2

Dimensions

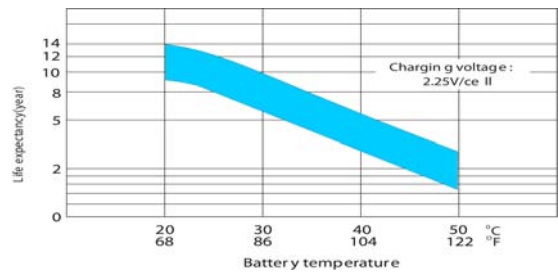
■ T11 Terminal
Unit: mm [inches]



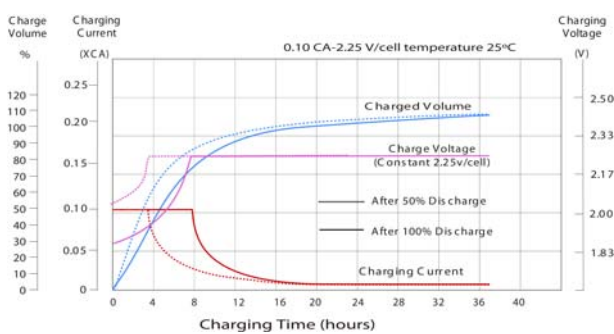
Discharge Characteristics



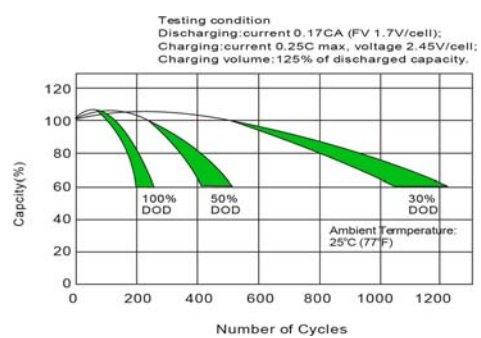
Effect of Temperature on Long Term Float Life



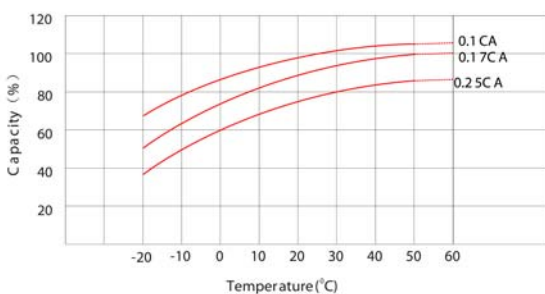
Float Charging Characteristics



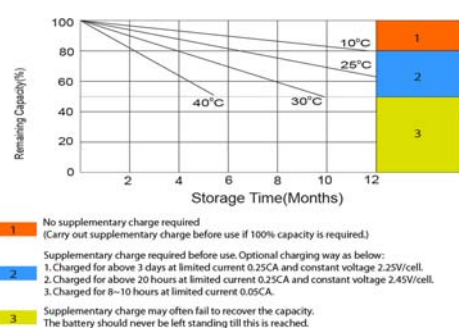
Cycle Life in Relation to Depth of Discharge



Temperature Effects in Relation to Battery Capacity



Self Discharge Characteristics



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