

## UP-G50-12



| Specification                       |   |                               |
|-------------------------------------|---|-------------------------------|
| Nominal Voltage                     | 12V   |                               |
| Nominal Capacity (20HR)             | 50.0AH  |                               |
| Dimension                           | Length  | 229±3mm (9.02 inches)         |
|                                     | Width   | 138±2mm (5.43 inches)         |
|                                     | Container Height  | 205±3mm (8.07 inches)         |
|                                     | Total Height (with Terminal)  | 211±3mm (8.31 inches)         |
|                                     | Approx Weight   | Approx 16.6 kg (36.60lbs)     |
| Terminal                            | T6  |                               |
| Container Material                  | ABS   |                               |
| Rated Capacity                      | 50.0 AH/2.50A   | (20hr, 1.80V/cell, 25°C/77°F) |
|                                     | 46.5 AH/4.65A   | (10hr, 1.75V/cell, 25°C/77°F) |
|                                     | 40.0 A H/8.00A  | (5hr, 1.75V/cell, 25°C/77°F)  |
|                                     | 34.8 AH/11.6A   | (3hr, 1.75V/cell, 25°C/77°F)  |
|                                     | 27.5 AH/27.5A   | (1hr, 1.67V/cell, 25°C/77°F)  |
| Max. Discharge Current              | 500A (5s)   |                               |
| Internal Resistance                 | Approx 9.0mΩ  |                               |
| Operating Temperature Range         | Discharge: -20~55°C (-4~131°F)  |                               |
|                                     | Change : 0~40°C (32~104°F)  |                               |
|                                     | Storage : -20~50°C (-4~122°F)   |                               |
| Nominal Operating Temperature Range | 25±3°C (77±5°F)   |                               |
| Cycle Use                           | Initial Charging Current less than 12.5A.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%  |                               |
| Self Discharge                      | Batteries may be stored for up to 9 months at 25°C (77°F) and then a freshening charge is required.     |                               |

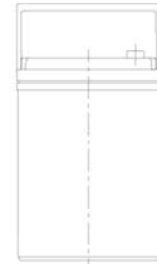
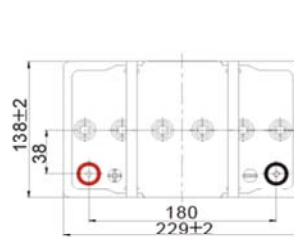
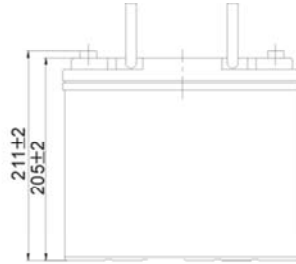
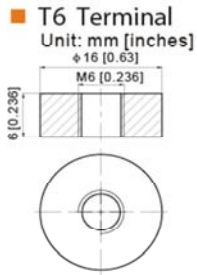
| Constant Current Discharge (Amperes) at 25°C (77°F) |       |       |       |      |      |      |      |      |      |      |      |      |      |      |
|---|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| F.V/Time  | 20min | 30min | 45min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 7h   | 8h   | 9h   | 10h  | 20h  |
| 1.85V/cell  | 42.3  | 33.2  | 25.3  | 21.2 | 13.5 | 10.3 | 8.49 | 7.33 | 6.33 | 5.60 | 5.05 | 4.62 | 4.37 | 2.40 |
| 1.80V/cell  | 48.5  | 37.1  | 27.9  | 23.4 | 14.6 | 11.0 | 9.00 | 7.70 | 6.64 | 5.86 | 5.29 | 4.86 | 4.56 | 2.50 |
| 1.75V/cell  | 54.5  | 40.8  | 30.2  | 25.1 | 15.4 | 11.6 | 9.43 | 8.00 | 6.88 | 6.07 | 5.46 | 5.00 | 4.65 | 2.55 |
| 1.70V/cell  | 58.7  | 43.7  | 32.1  | 26.5 | 16.4 | 12.1 | 9.74 | 8.25 | 7.12 | 6.27 | 5.63 | 5.13 | 4.76 | 2.58 |
| 1.67V/cell  | 61.1  | 45.4  | 33.2  | 27.5 | 16.8 | 12.5 | 10.0 | 8.42 | 7.23 | 6.36 | 5.71 | 5.20 | 4.82 | 2.61 |
| 1.60V/cell  | 66.2  | 48.6  | 35.7  | 29.2 | 17.5 | 13.0 | 10.4 | 8.68 | 7.41 | 6.50 | 5.81 | 5.31 | 4.91 | 2.65 |

| Constant Power Discharge (Watts/cell) at 25°C (77°F) |       |       |       |      |      |      |      |      |      |      |      |      |      |      |
|--|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| F.V/Time   | 20min | 30min | 45min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 7h   | 8h   | 9h   | 10h  | 20h  |
| 1.85V/cell   | 81.0  | 64.0  | 49.1  | 41.3 | 26.3 | 20.1 | 16.7 | 14.5 | 12.5 | 11.1 | 10.0 | 9.20 | 8.70 | 4.79 |
| 1.80V/cell   | 91.5  | 70.8  | 53.8  | 45.3 | 28.3 | 21.4 | 17.6 | 15.1 | 13.1 | 11.6 | 10.5 | 9.65 | 9.07 | 4.98 |
| 1.75V/cell   | 101.7 | 77.2  | 57.7  | 48.3 | 29.9 | 22.6 | 18.4 | 15.7 | 13.5 | 12.0 | 10.8 | 9.93 | 9.24 | 5.08 |
| 1.70V/cell   | 108.4 | 81.9  | 60.8  | 50.8 | 31.6 | 23.5 | 19.0 | 16.1 | 14.0 | 12.4 | 11.1 | 10.2 | 9.45 | 5.14 |
| 1.67V/cell   | 111.5 | 84.2  | 62.6  | 52.4 | 32.2 | 24.1 | 19.4 | 16.4 | 14.2 | 12.5 | 11.3 | 10.3 | 9.55 | 5.18 |
| 1.60V/cell   | 119.5 | 89.3  | 66.7  | 55.3 | 33.3 | 25.0 | 20.0 | 16.9 | 14.5 | 12.7 | 11.4 | 10.5 | 9.72 | 5.25 |

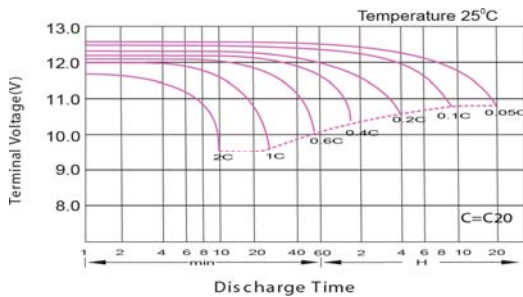


## UP-G50-12

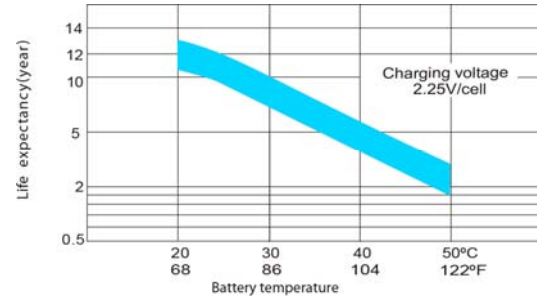
### Dimensions



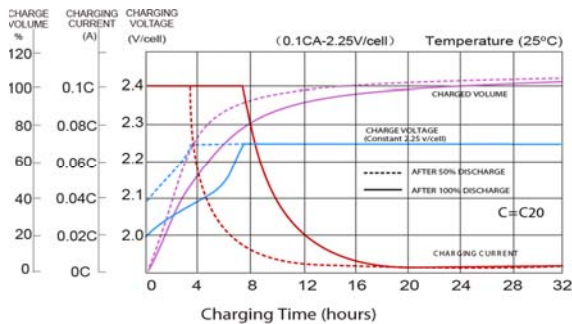
### Discharge Characteristics



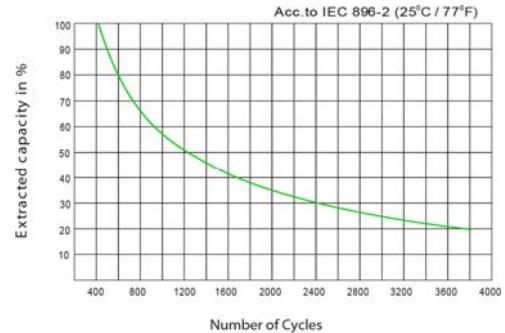
### Effect of Temperature on Long Term Float Life



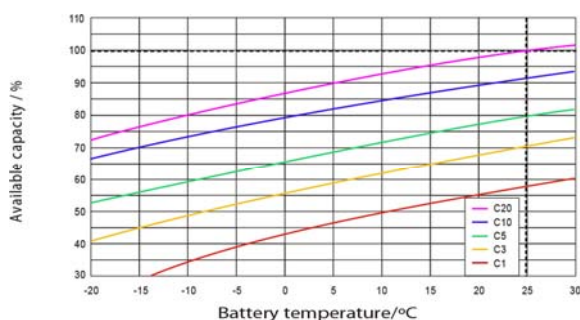
### Float Charging Characteristics



### Cycle Life in Relation to Depth of Discharge



### Temperature Effects in Relation to Battery Capacity



### General Relation of Capacity VS. Storage Time

