

UP-DC3.5-12



| Specification | | |
|-------------------------------------|--|-------------------------------|
| Nominal Voltage | 12V | |
| Nominal Capacity (10HR) | 3.5AH | |
| Dimension | Length | 134±1mm (5.28 inches) |
| | Width | 67±1mm (2.64 inches) |
| | Container Height | 60.5±1mm (2.38 inches) |
| | Total Height (with Terminal) | 66.5±1mm (2.62 inches) |
| Approx Weight | Approx 1.35 Kg (2.98 lbs) | |
| Terminal | T1 | |
| Container Material | ABS | |
| Rated Capacity | 3.75 AH/0.19A | (20hr, 1.80V/cell, 25°C/77°F) |
| | 3.50AH/0.35A | (10hr, 1.80V/cell, 25°C/77°F) |
| | 3.07 AH/0.61A | (5hr, 1.75V/cell, 25°C/77°F) |
| | 2.78 AH/0.93A | (3hr, 1.75V/cell, 25°C/77°F) |
| | 2.26 AH/2.26A | (1hr, 1.60V/cell, 25°C/77°F) |
| Max. Discharge Current | 52.5A (5s) | |
| Internal Resistance | Approx 45.0mΩ | |
| Operating Temperature Range | Discharge: -15~50°C (5~122°F) | |
| | Change : 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 1.05A.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 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 | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
| 1.85V/cell | 5.12 | 4.31 | 3.77 | 2.71 | 2.15 | 1.75 | 1.09 | 0.85 | 0.69 | 0.56 | 0.49 | 0.397 | 0.330 | 0.186 |
| 1.80V/cell | 6.55 | 5.21 | 4.45 | 3.20 | 2.50 | 1.96 | 1.18 | 0.91 | 0.73 | 0.60 | 0.52 | 0.421 | 0.350 | 0.188 |
| 1.75V/cell | 7.19 | 5.69 | 4.79 | 3.32 | 2.60 | 2.05 | 1.23 | 0.93 | 0.75 | 0.61 | 0.54 | 0.428 | 0.354 | 0.189 |
| 1.70V/cell | 7.84 | 6.08 | 5.04 | 3.46 | 2.70 | 2.11 | 1.28 | 0.95 | 0.77 | 0.63 | 0.55 | 0.434 | 0.357 | 0.193 |
| 1.65V/cell | 8.46 | 6.46 | 5.35 | 3.65 | 2.77 | 2.18 | 1.31 | 0.99 | 0.79 | 0.65 | 0.56 | 0.441 | 0.364 | 0.195 |
| 1.60V/cell | 9.19 | 6.91 | 5.70 | 3.85 | 2.89 | 2.26 | 1.36 | 1.02 | 0.82 | 0.67 | 0.57 | 0.445 | 0.368 | 0.196 |

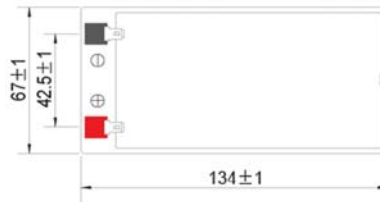
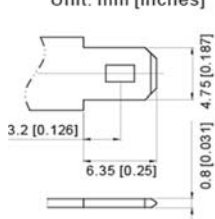
| Constant Power Discharge (Watts) at 25°C (77°F) | | | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
| 1.85V/cell | 9.56 | 8.13 | 7.18 | 5.21 | 4.17 | 3.39 | 2.12 | 1.65 | 1.34 | 1.09 | 0.96 | 0.785 | 0.654 | 0.372 |
| 1.80V/cell | 12.1 | 9.68 | 8.36 | 6.07 | 4.81 | 3.78 | 2.29 | 1.77 | 1.43 | 1.17 | 1.03 | 0.831 | 0.693 | 0.375 |
| 1.75V/cell | 13.1 | 10.5 | 8.92 | 6.27 | 4.96 | 3.94 | 2.37 | 1.80 | 1.46 | 1.20 | 1.05 | 0.845 | 0.699 | 0.378 |
| 1.70V/cell | 14.1 | 11.1 | 9.32 | 6.50 | 5.15 | 4.05 | 2.46 | 1.84 | 1.49 | 1.23 | 1.07 | 0.856 | 0.705 | 0.385 |
| 1.65V/cell | 15.1 | 11.7 | 9.85 | 6.83 | 5.26 | 4.17 | 2.52 | 1.92 | 1.54 | 1.26 | 1.09 | 0.869 | 0.719 | 0.389 |
| 1.60V/cell | 16.1 | 12.4 | 10.4 | 7.14 | 5.43 | 4.29 | 2.59 | 1.97 | 1.58 | 1.29 | 1.12 | 0.876 | 0.726 | 0.391 |



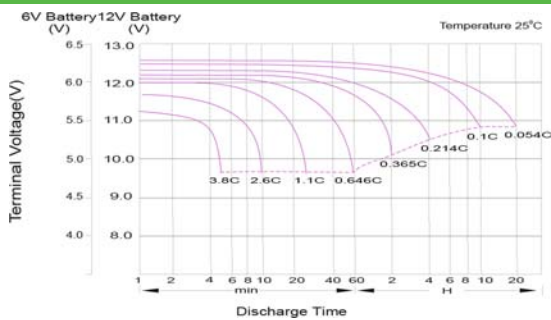
UP-DC3.5-12

Dimensions

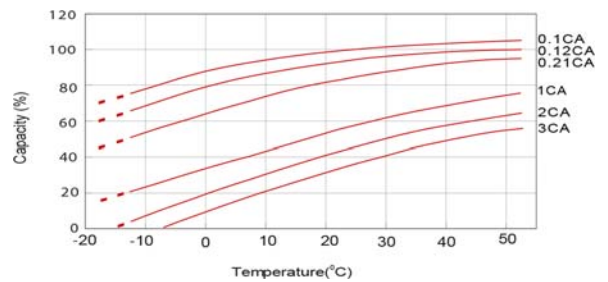
T1 Terminal
Unit: mm [inches]



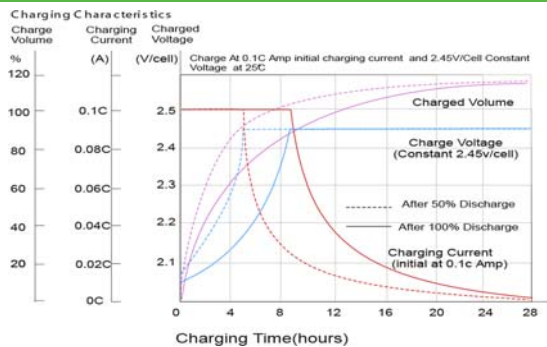
Discharge Characteristics



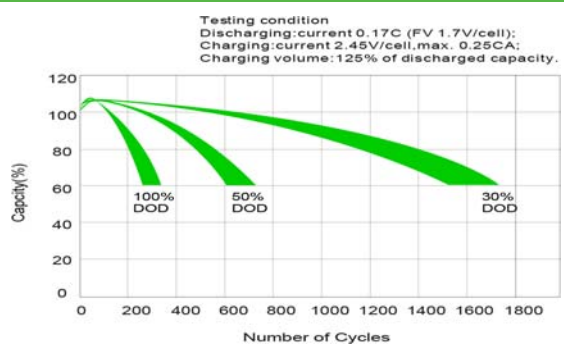
Temperature Effects in Relation to Battery Capacity



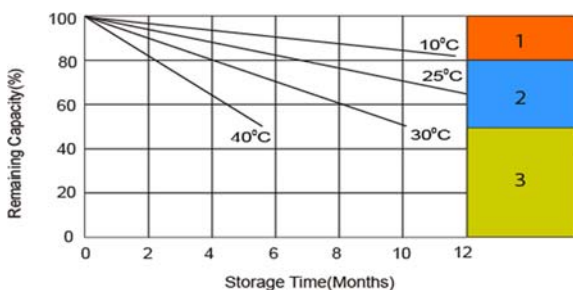
Charging Characteristics (cycle use)



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



- 1** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)
- 2** Supplementary charge required before use. Optional charging way as below:
 - 1. Charged for above 3 days at limited current 0.25CA and constant volatge 2.25V/cell.
 - 2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
 - 3. Charged for 8~10hours at limited current 0.05CA .
- 3** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

