

## VO SERIES (5yr Design Life in Float Service at 20°C)

| Dimensions (mm)         |                              |             |
|-------------------------|------------------------------|-------------|
|                         |                              |             |
| Standard Terminal (mm)  |                              |             |
|                         |                              |             |
| Physical Specification  |                              |             |
| Nominal Voltage         | 12V                          |             |
| Nominal Capacity (20HR) | 3.4 AH                       |             |
| Dimension               | Length                       | 134 ± 2 mm  |
|                         | Width                        | 67 ± 2 mm   |
|                         | Container Height             | 60.5 ± 2 mm |
|                         | Total Height (with terminal) | 66.5 ± 2 mm |
| Weight                  | Approx 1.35kg                |             |
| Standard Terminal       | F1                           |             |
| Case and Cover Material | ABS (UL94-V0)                |             |

| PS-1230 VO 12V 3.4AH                   |                       |        |                         |  |   |
|--|-----------------------|--------|-------------------------|--|---|
|  |                       |        |                         |  |   |
| Operating Temperature Range            |                       |        |                         |  |   |
| Storage (In fully charged condition)   | - 20°C to + 60°C      |        |                         |  |   |
| Charge                                 | - 15°C to + 50°C      |        |                         |  |   |
| Discharge                              | - 20°C to + 60°C      |        |                         |  |   |
| Discharge Characteristics (25°C, 77°F) |                       |        |                         |  |   |
| Rated Capacity                         | 20h Rate (1.80V/cell) | 3.20AH | Constant Voltage Charge | Cycle  | Initial Charging Current<br>Less than 0.85A<br>Voltage 14.40V ~ 15.0V<br>at 25°C (77°F) |
|  | 10h Rate (1.80V/cell) | 2.98AH |                         |  |   |
|  | 5h Rate (1.75V/cell)  | 2.69AH |                         |  |   |
|  | 3h Rate (1.75V/cell)  | 2.35AH |                         |  |   |
| Capacity Affected by Temperature       | 40°C (104°F)          | 103%   | Standby                 | Recommended Charge<br>Current less than 0.85A<br>Voltage 13.5V ~ 13.8V<br>at 25°C (77°F) |   |
|  | 25°C (77°F)           | 100%   |                         |  |   |
|  | 0°C (32°F)            | 86%    |                         |  |   |
| Internal Resistance mΩ                 |                       |        |                         |  |   |
| Approx 45.0 mΩ                         |                       |        |                         |  |   |

| Constant Current Discharge (Amperes) at 25°C (77°F)  |      |       |       |       |       |       |      |       |       |       |       |       |       |       |       |
|--|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 2h    | 3h    | 4h    | 5h    | 6h    | 8h    | 10h   | 20h   |
| 1.85V/cell   | 6.14 | 4.28  | 3.53  | 3.06  | 2.46  | 1.89  | 1.55 | 0.944 | 0.719 | 0.591 | 0.502 | 0.435 | 0.345 | 0.287 | 0.158 |
| 1.80V/cell   | 7.55 | 5.11  | 4.10  | 3.47  | 2.72  | 2.06  | 1.66 | 1.00  | 0.756 | 0.622 | 0.524 | 0.454 | 0.358 | 0.298 | 0.160 |
| 1.75V/cell   | 8.95 | 5.78  | 4.52  | 3.77  | 2.91  | 2.19  | 1.75 | 1.05  | 0.783 | 0.641 | 0.538 | 0.465 | 0.368 | 0.303 | 0.162 |
| 1.70V/cell   | 10.2 | 6.37  | 4.89  | 4.05  | 3.05  | 2.27  | 1.82 | 1.09  | 0.809 | 0.657 | 0.551 | 0.476 | 0.374 | 0.308 | 0.164 |
| 1.65V/cell   | 11.2 | 6.85  | 5.17  | 4.25  | 3.18  | 2.36  | 1.90 | 1.12  | 0.829 | 0.670 | 0.563 | 0.485 | 0.380 | 0.313 | 0.167 |
| 1.60V/cell   | 11.8 | 7.14  | 5.39  | 4.39  | 3.27  | 2.41  | 1.94 | 1.16  | 0.849 | 0.687 | 0.575 | 0.495 | 0.388 | 0.318 | 0.168 |
| Constant Power Discharge (Watts/cell) at 25°C (77°F) |      |       |       |       |       |       |      |       |       |       |       |       |       |       |       |
| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 2h    | 3h    | 4h    | 5h    | 6h    | 8h    | 10h   | 20h   |
| 1.85V/cell   | 11.6 | 8.16  | 6.79  | 5.93  | 4.79  | 3.71  | 3.04 | 1.87  | 1.43  | 1.18  | 1.00  | 0.872 | 0.695 | 0.579 | 0.320 |
| 1.80V/cell   | 14.1 | 9.64  | 7.81  | 6.66  | 5.27  | 4.01  | 3.26 | 1.98  | 1.49  | 1.23  | 1.04  | 0.905 | 0.716 | 0.596 | 0.322 |
| 1.75V/cell   | 16.5 | 10.8  | 8.53  | 7.20  | 5.59  | 4.24  | 3.41 | 2.05  | 1.54  | 1.26  | 1.06  | 0.921 | 0.731 | 0.604 | 0.322 |
| 1.70V/cell   | 18.5 | 11.8  | 9.15  | 7.67  | 5.83  | 4.38  | 3.53 | 2.12  | 1.58  | 1.29  | 1.08  | 0.938 | 0.738 | 0.610 | 0.326 |
| 1.65V/cell   | 20.1 | 12.5  | 9.56  | 7.97  | 6.03  | 4.52  | 3.66 | 2.17  | 1.61  | 1.31  | 1.10  | 0.952 | 0.746 | 0.616 | 0.329 |
| 1.60V/cell   | 20.8 | 12.9  | 9.86  | 8.13  | 6.13  | 4.58  | 3.71 | 2.22  | 1.64  | 1.33  | 1.12  | 0.966 | 0.758 | 0.623 | 0.330 |