



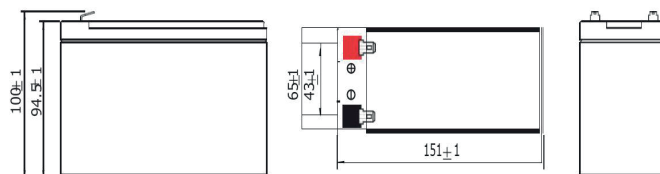
## SPECIFICATIONS

|                                                                                                                                                                                                 |                                    |                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------|
| Nominal Voltage                                                                                                                                                                                 |                                    | 12 V                                                           |
| Rated Capacity (20 hour rate)                                                                                                                                                                   |                                    | 7.0 Ah                                                         |
| Rated Capacity                                                                                                                                                                                  | 20 hour rate(1.75V/cell,25°C/77°F) | 7.00Ah/0.35A                                                   |
|                                                                                                                                                                                                 | 10 hour rate(1.75V/cell,25°C/77°F) | 6.85Ah/0.685A                                                  |
|                                                                                                                                                                                                 | 5 hour rate (1.75V/cell,25°C/77°F) | 6.40Ah/1.28A                                                   |
|                                                                                                                                                                                                 | 3 hour rate (1.75V/cell,25°C/77°F) | 5.73Ah/1.91A                                                   |
|                                                                                                                                                                                                 | 1 hour rate (1.60V/cell,25°C/77°F) | 4.12Ah/4.12A                                                   |
| Max. discharge current                                                                                                                                                                          |                                    | 97A(5 Sec.)                                                    |
| Internal Resistance                                                                                                                                                                             |                                    | Full charged at 25°C :<br>Approx 23mΩ                          |
| Capacity affected<br>by Temperature                                                                                                                                                             | 40°C (104°F)                       | 103%                                                           |
|                                                                                                                                                                                                 | 25°C (77°F)                        | 100%                                                           |
|                                                                                                                                                                                                 | 0°C (32°F)                         | 86%                                                            |
| Self-Discharge<br>ORBUS GP series batterys may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter. |                                    |                                                                |
| Charge<br>(Constant Voltage)<br>25°C (77°F)                                                                                                                                                     | Cycle Use                          | Initial Charging Current Less than 1.95A<br>Voltage 14.4-15.0V |
|                                                                                                                                                                                                 | Float Use                          | Voltage 13.5-13.8V                                             |

## MECHANICAL SPECIFICATIONS

|                       |                  |
|-----------------------|------------------|
| Dimension (L x W x H) | 151 x 65 x 94 mm |
| Weight                | 2.0 Kg           |
| Terminal Type         | T1 / T2          |
| Case Material         | ABS              |
| Chemistry             | Pb               |

## DIMENSIONAL SPECIFICATIONS



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

| FV/Time       | 5min  | 10min | 15min | 20min | 30min | 45min | 1hr  | 2hr  | 3hr  | 4hr  | 5hr  | 6hr  | 8hr  | 10hr  | 20hr  |
|---------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|-------|-------|
| <b>1.85 V</b> | 18.05 | 13.34 | 7.60  | 6.22  | 4.60  | 4.06  | 3.40 | 2.34 | 1.70 | 1.36 | 1.13 | 0.89 | 0.78 | 0.625 | 0.302 |
| <b>1.80 V</b> | 19.70 | 14.26 | 8.02  | 6.72  | 5.90  | 4.56  | 3.90 | 2.49 | 1.85 | 1.46 | 1.23 | 0.99 | 0.81 | 0.685 | 0.332 |
| <b>1.75 V</b> | 21.20 | 15.48 | 9.02  | 7.42  | 6.80  | 4.81  | 4.12 | 2.59 | 1.91 | 1.51 | 1.28 | 1.09 | 0.84 | 0.685 | 0.362 |
| <b>1.70 V</b> | 23.16 | 16.38 | 10.52 | 8.62  | 7.10  | 5.01  | 4.42 | 2.69 | 1.96 | 1.56 | 1.30 | 1.17 | 0.87 | 0.715 | 0.382 |
| <b>1.65 V</b> | 25.55 | 16.98 | 12.02 | 9.82  | 7.55  | 5.41  | 4.62 | 2.79 | 2.06 | 1.61 | 1.33 | 1.25 | 0.90 | 0.745 | 0.402 |
| <b>1.60 V</b> | 27.65 | 17.28 | 13.82 | 11.02 | 7.85  | 5.81  | 4.82 | 2.99 | 2.21 | 1.66 | 1.39 | 1.36 | 0.94 | 0.785 | 0.422 |

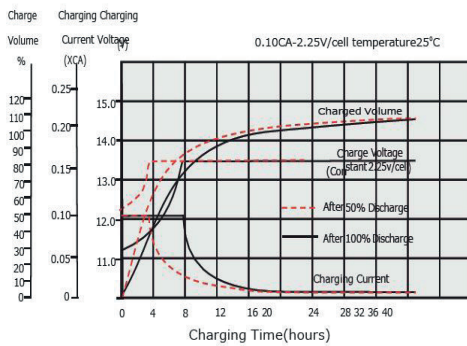
Disclaimer: Manufacturers have the right to self-modify the parameters of the product updates, please keep in touch with manufacturers to obtain the latest information.

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

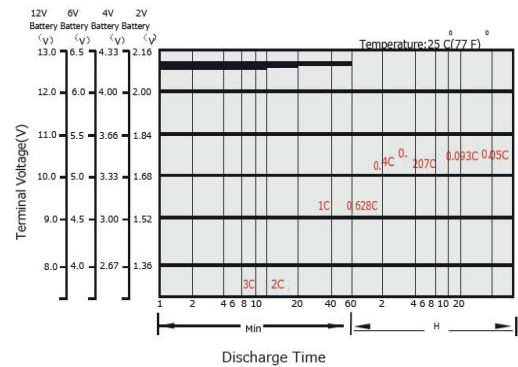
| FV/Time       | 5min  | 10min | 15min | 20min | 30min | 45min | 1hr  | 2hr  | 3hr  | 4hr  | 5hr  | 6hr  | 8hr  | 10hr | 20hr  |
|---------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|
| <b>1.85 V</b> | 33.79 | 24.98 | 14.28 | 11.67 | 8.68  | 7.66  | 6.45 | 4.44 | 3.24 | 2.60 | 2.16 | 1.69 | 1.47 | 1.18 | 0.567 |
| <b>1.80 V</b> | 35.88 | 25.98 | 14.66 | 12.27 | 10.83 | 8.37  | 7.20 | 4.60 | 3.43 | 2.71 | 2.28 | 1.83 | 1.48 | 1.20 | 0.606 |
| <b>1.75 V</b> | 37.54 | 27.42 | 16.03 | 13.17 | 12.13 | 8.58  | 7.40 | 4.65 | 3.44 | 2.73 | 2.31 | 1.96 | 1.50 | 1.22 | 0.643 |
| <b>1.70 V</b> | 39.82 | 28.18 | 18.16 | 14.87 | 12.31 | 8.68  | 7.71 | 4.69 | 3.43 | 2.74 | 2.28 | 2.04 | 1.51 | 1.24 | 0.659 |
| <b>1.65 V</b> | 42.66 | 28.35 | 20.14 | 16.44 | 12.70 | 9.10  | 7.82 | 4.72 | 3.50 | 2.74 | 2.26 | 2.12 | 1.51 | 1.25 | 0.673 |
| <b>1.60 V</b> | 44.77 | 27.97 | 22.45 | 17.89 | 12.81 | 9.48  | 7.91 | 4.91 | 3.65 | 2.74 | 2.29 | 2.23 | 1.53 | 1.28 | 0.685 |

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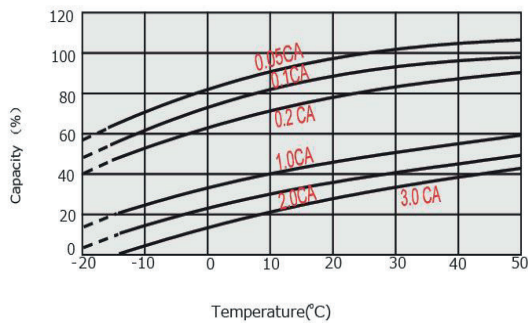
### Float Charging Characteristics



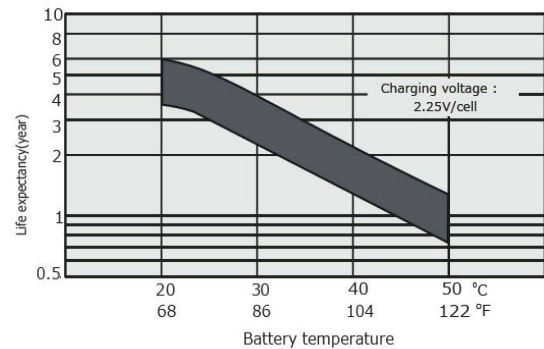
### Discharge Characteristics



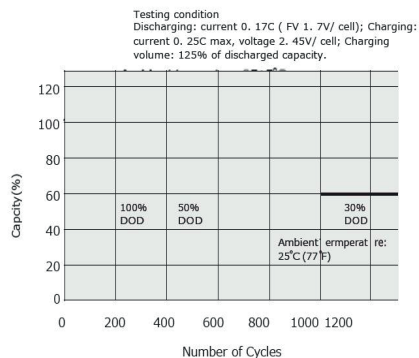
### Temperature Effects in Relation to Battery Capacity



### Effect of Temperature on Long Term Float Life



### Cycle Life in Relation to Depth of Discharge



### Self Discharge Characteristics

