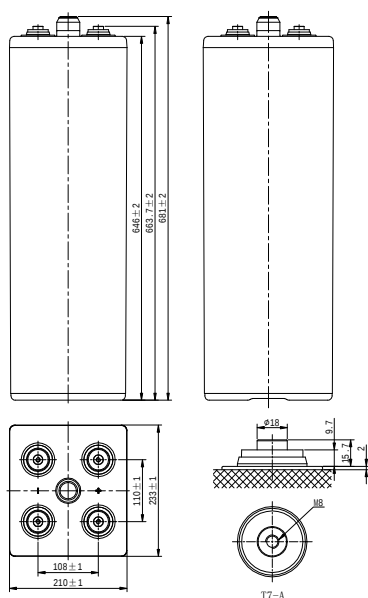
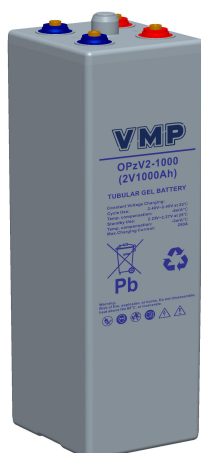


# OPzV SERIES-TUBULAR GEL

OPzV2-1000 (2V1000Ah)

# VMP



## CHARACTERISTICS

| Item                          | Specifications                 |                     |
|-------------------------------|--------------------------------|---------------------|
| Rated Voltage                 | 2V                             |                     |
| Nominal Capacity (25°C)       | C <sub>10</sub> : 1.80V/cell   | 1000Ah              |
| Dimension                     | Length                         | 233mm (9.17inches)  |
|                               | Width                          | 210mm (8.27inches)  |
|                               | Container Height               | 646mm (25.4inches)  |
|                               | Total Height                   | 681mm (26.8inches)  |
| Approx Weight                 | 68.6kg (151.2lbs)              |                     |
| Terminal                      | T7-A(M8)                       |                     |
| Container Material            | ABS (UL94 HB or V-0 optional)  |                     |
| Short-circuit current         | 6000.0A                        |                     |
| Internal Resistance (25°C)    | Approx 0.55 mΩ (Fully charged) |                     |
| Operating Temp. Range         | Discharge                      | -20~55°C (-4~131°F) |
|                               | Charge                         | 0~40°C (32~104°F)   |
|                               | Storage                        | -20~50°C (-4~122°F) |
| Nominal Operating Temp. Range | 25±3°C (77±5°F)                |                     |
| Max.Charging Current (25°C)   | 0.25C                          |                     |
| Charge voltage (25°C)         | Standby Use                    | Cycle Use           |
|                               | 2.23-2.27V/cell                | 2.40-2.45V/cell     |
| Temp. Coefficient             | -3mV/cell/°C                   | -5mV/cell/°C        |
|                               | 40°C (104°F)                   | 106%                |
| Effect of temp. to Capacity   | 25°C (77°F)                    | 100%                |
|                               | 0°C (32°F)                     | 86%                 |
| Self Discharge                | ≤3% per month at 25°C (77°F)   |                     |

## DISCHARGE TABLE

| Constant Current Discharge (Amperes) at 25°C (77°F)  |        |       |       |       |       |       |      |      |      |      |      |
|------------------------------------------------------|--------|-------|-------|-------|-------|-------|------|------|------|------|------|
| F.V/Time                                             | 1h     | 2h    | 3h    | 5h    | 8h    | 10h   | 24h  | 48h  | 72h  | 100h | 120h |
| 1.85V/cell                                           | 429.0  | 290.1 | 222.7 | 152.4 | 106.8 | 93.7  | 43.2 | 22.6 | 16.2 | 12.3 | 10.6 |
| 1.80V/cell                                           | 481.0  | 317.8 | 242.2 | 164.2 | 114.2 | 100.0 | 44.6 | 23.5 | 16.9 | 12.6 | 11.0 |
| 1.75V/cell                                           | 500.1  | 328.8 | 247.8 | 167.4 | 116.2 | 101.7 | 44.9 | 24.0 | 17.3 | 12.9 | 11.1 |
| 1.70V/cell                                           | 522.0  | 337.1 | 252.7 | 169.9 | 117.8 | 102.9 | 45.7 | 24.4 | 17.5 | 13.1 | 11.3 |
| 1.67V/cell                                           | 535.6  | 342.6 | 257.4 | 172.7 | 119.2 | 103.7 | 46.1 | 24.7 | 17.6 | 13.3 | 11.4 |
| 1.60V/cell                                           | 543.8  | 348.2 | 260.4 | 174.3 | 120.0 | 104.6 | 46.5 | 24.9 | 17.8 | 13.4 | 11.5 |
| Constant Power Discharge (Watts/cell) at 25°C (77°F) |        |       |       |       |       |       |      |      |      |      |      |
| F.V/Time                                             | 1h     | 2h    | 3h    | 5h    | 8h    | 10h   | 24h  | 48h  | 72h  | 100h | 120h |
| 1.85V/cell                                           | 828.0  | 563.7 | 434.4 | 299.2 | 211.7 | 186.3 | 86.3 | 45.2 | 32.6 | 24.7 | 21.3 |
| 1.80V/cell                                           | 926.4  | 616.2 | 470.2 | 321.2 | 226.3 | 198.6 | 89.1 | 46.9 | 33.8 | 25.3 | 21.9 |
| 1.75V/cell                                           | 956.4  | 630.0 | 478.5 | 326.7 | 229.5 | 201.4 | 89.6 | 47.9 | 34.6 | 25.8 | 22.2 |
| 1.70V/cell                                           | 989.3  | 643.8 | 486.7 | 332.2 | 232.0 | 203.4 | 91.0 | 48.8 | 34.9 | 26.2 | 22.5 |
| 1.67V/cell                                           | 1008.4 | 654.8 | 495.0 | 334.9 | 234.2 | 205.1 | 91.7 | 49.2 | 35.1 | 26.6 | 22.8 |
| 1.60V/cell                                           | 1019.3 | 660.4 | 497.7 | 337.6 | 235.4 | 206.3 | 92.3 | 49.7 | 35.3 | 26.8 | 23.0 |

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## APPLICATIONS

- Float charging applications: communication center, telecom basestation, UPS, power station, electric substation
- Solar and wind energy storage system
- Off-grid and bad-grid hybrid sites

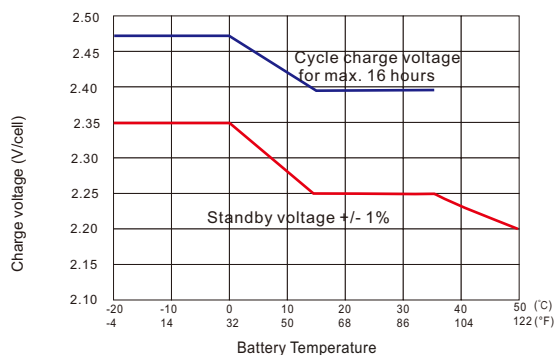
## GENERAL FEATURES

- 20 year design life (20°C)
- Strong Lead-calcium alloy tubular plate technology - for longer life in the toughest conditions
- Gelled electrolyte for superior thermal management, long float life
- Proof against deep discharge - greater long-term energy delivery
- Exceptional cycling performance - 2500+ cycles at 60% Depth of Discharge

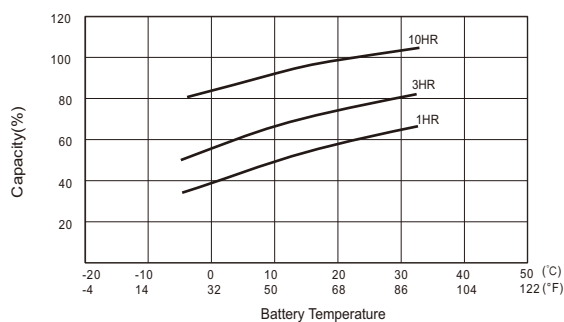
## STANDARDS

- Compliance with IEC 60896, IEC 61427, DIN 40742 standards

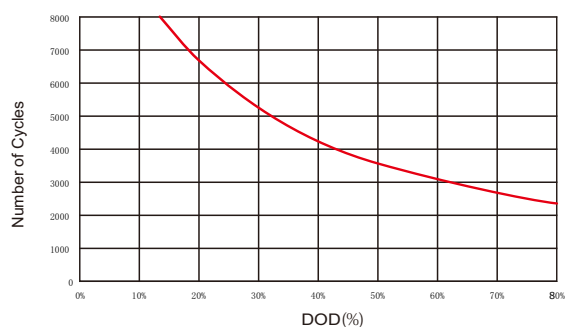
Charge Voltage vs Ambient Temperature Curve



Temperature Effects in Relation to Capacity



Cycle life



Self Discharge Characteristics

