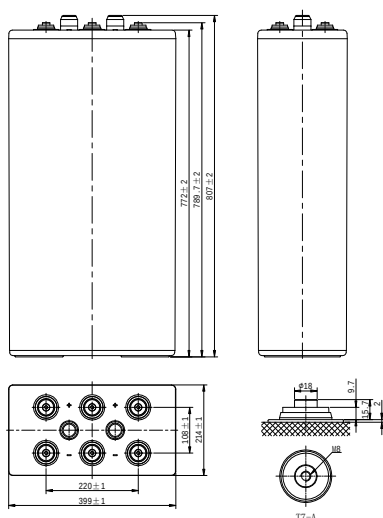


# OPzV SERIES-TUBULAR GEL

## 16OPzV2000 (2V2000Ah)



## CHARACTERISTICS

| Item                          | Specifications                 |                     |
|-------------------------------|--------------------------------|---------------------|
| Rated Voltage                 | 2V                             |                     |
| Nominal Capacity (25°C)       | C <sub>10</sub> , 1.80V/cell   | 2000Ah              |
| Dimension                     | Length                         | 399mm (15.7inches)  |
|                               | Width                          | 214mm (8.43inches)  |
|                               | Container Height               | 772mm (30.4inches)  |
|                               | Total Height                   | 807mm (31.8inches)  |
| Approx Weight                 | 155.0kg (341.7lbs)             |                     |
| Terminal                      | T7-A(M8)                       |                     |
| Container Material            | ABS (UL94 HB or V-0 optional)  |                     |
| Short-circuit current         | 10000A                         |                     |
| Internal Resistance (25°C)    | Approx 0.31 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                                           | 893.8  | 604.4  | 464.0  | 317.4 | 222.5 | 187.4 | 89.0  | 46.5  | 33.5 | 25.4 | 21.9 |
| 1.80V/cell                                           | 1002.0 | 662.0  | 504.7  | 342.0 | 238.0 | 200.0 | 92.1  | 48.3  | 34.7 | 26.0 | 22.5 |
| 1.75V/cell                                           | 1041.9 | 685.0  | 516.1  | 348.9 | 242.0 | 203.4 | 92.7  | 49.4  | 35.6 | 26.5 | 22.8 |
| 1.70V/cell                                           | 1087.4 | 702.3  | 526.4  | 354.0 | 245.5 | 205.7 | 94.2  | 50.4  | 36.0 | 26.9 | 23.1 |
| 1.67V/cell                                           | 1115.9 | 713.8  | 536.2  | 359.7 | 248.3 | 207.4 | 95.0  | 50.9  | 36.3 | 27.4 | 23.4 |
| 1.60V/cell                                           | 1132.9 | 725.3  | 542.5  | 363.2 | 250.1 | 209.1 | 95.8  | 51.5  | 36.5 | 27.7 | 23.7 |
| 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                                           | 1725.0 | 1174.3 | 905.1  | 623.4 | 440.9 | 372.6 | 177.9 | 93.2  | 67.2 | 51.0 | 44.0 |
| 1.80V/cell                                           | 1930.0 | 1283.7 | 979.5  | 669.1 | 471.4 | 397.1 | 183.8 | 96.6  | 69.6 | 52.2 | 45.2 |
| 1.75V/cell                                           | 1992.6 | 1312.5 | 996.7  | 680.6 | 478.3 | 402.9 | 184.8 | 98.7  | 71.3 | 53.2 | 45.9 |
| 1.70V/cell                                           | 2060.9 | 1341.3 | 1013.9 | 692.0 | 483.5 | 406.9 | 187.6 | 100.5 | 72.0 | 53.9 | 46.4 |
| 1.67V/cell                                           | 2100.8 | 1364.3 | 1031.1 | 697.7 | 488.1 | 410.3 | 189.1 | 101.5 | 72.5 | 54.8 | 47.0 |
| 1.60V/cell                                           | 2123.6 | 1375.8 | 1036.8 | 703.4 | 490.4 | 412.6 | 190.4 | 102.5 | 72.9 | 55.3 | 47.4 |

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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

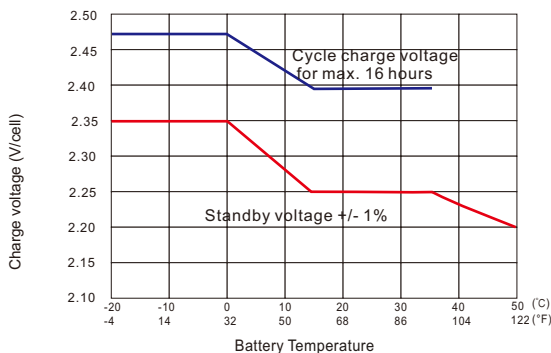
## GENERAL FEATURES

- 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

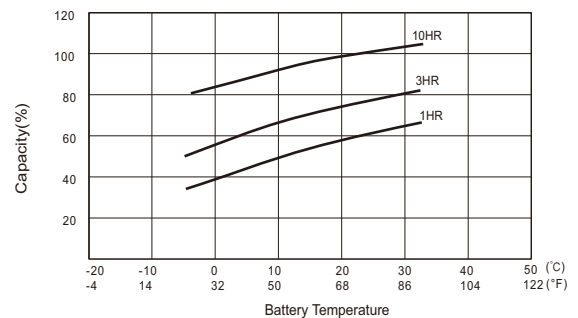
## STANDARDS

- Compliance with IEC 60896, IEC 61427, DIN 40742 standards
- UL, CE Approved
- Manufactured in Leoch® IATF 16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

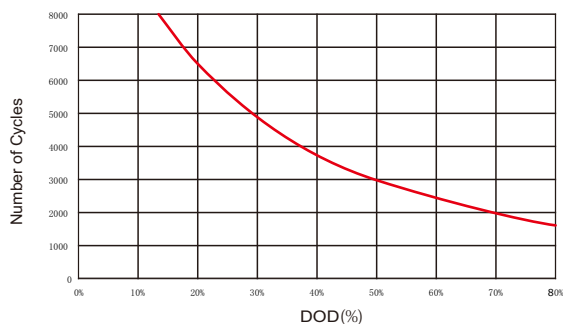
Charge Voltage vs Ambient Temperature Curve



Temperature Effects in Relation to Capacity



Cycle life



Self Discharge Characteristics

