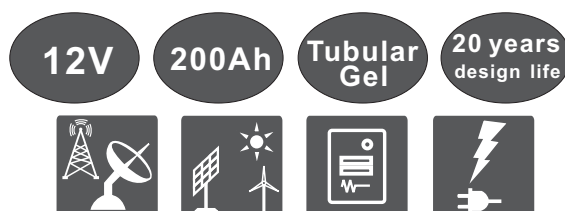
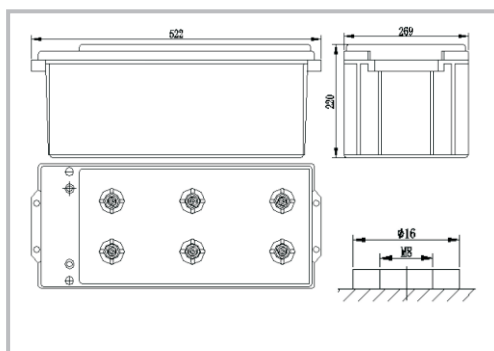


## 12V TUBULAR GEL SERIES VRLA BATTERY

The OPzV series adopts an Immobilized Gel and Tubular Positive Plate technology. It offers high reliability and stable performance. By using die-casted positive grid and patented active material formula, it exceeds the DIN standard values and offer 20+ years design life in float service. It is very suitable for cyclic use under extreme operating conditions. This series is recommended for telecom outdoor applications, renewable energy systems and other harsh environment applications.

## DIMENSIONS



## SPECIFICATIONS

|                                   |                                                              |
|-----------------------------------|--------------------------------------------------------------|
| Nominal Voltage (V)               | 12                                                           |
| Designed Floating Life (20°C)     | 20+ Years                                                    |
| Nominal Capacity (20°C)           | 200 Ah @ C <sub>10</sub> (to 1.80Vpc)                        |
| Dimensions                        | L522mm×W269mm×H220mm                                         |
| Approx. Weight                    | 73.5 kg (162 lbs)                                            |
| Terminal Type                     | Female Copper Insert M8 (torque:10~12N.m)                    |
| Internal Resistance               | Approx. 2.4mOhm (fully charged @ 20°C)                       |
| Max. Charge Current               | 40 A                                                         |
| Max. Discharge Current (5S)       | 1250 A                                                       |
| Short Circuit Current             | 5000 A                                                       |
| Self Discharge                    | Approx. 2% per month @ 20°C                                  |
| Ambient Temperature               | Discharge: -15~50°C<br>Charge: -10~50°C<br>Storage: -20~50°C |
| Float Charge Voltage (20~25°C)    | 13.50-13.80V (-18mV / °C/ cell)                              |
| Equalize Charge Voltage (20~25°C) | 13.80-14.10V (-30mV / °C/ cell)                              |
| Container Material                | ABS(UL94-V0 optional)                                        |



### Complied standards

- IEC 60896-21/22
- DIN40742
- IEC61427
- YD/T1360
- Eurobat guide, long life
- BS6290 part 4
- UL1989

## BATTERY DISCHARGE TABLE

| Constant Current Discharge Characteristics(A,25°C) |       |       |      |      |      |      |      |      |      |      |      |      |      |
|----------------------------------------------------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| F.V/TIME                                           | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  | 24h  | 48h  | 50h  |
| 1.65V                                              | 163   | 105   | 68.2 | 50.3 | 42.4 | 36.1 | 30.8 | 23.3 | 19.3 | 10.2 | 9.28 | 4.92 | 4.88 |
| 1.70v                                              | 158   | 102   | 67.6 | 49.9 | 42.1 | 35.8 | 30.6 | 23.2 | 19.2 | 10.1 | 9.21 | 4.90 | 4.85 |
| 1.75v                                              | 154   | 99.9  | 66.6 | 49.6 | 41.8 | 35.6 | 30.4 | 23.0 | 19.1 | 10.1 | 9.20 | 4.87 | 4.80 |
| 1.80v                                              | 148   | 96.9  | 64.9 | 48.1 | 40.5 | 34.5 | 29.5 | 22.3 | 19.0 | 10.0 | 9.16 | 4.84 | 4.75 |
| 1.85v                                              | 138   | 90.3  | 62.2 | 45.6 | 38.5 | 32.8 | 28.0 | 21.2 | 18.2 | 9.60 | 8.79 | 4.72 | 4.70 |

| Constant Power Discharge Characteristics(Watt,25°C) |       |       |     |      |      |      |      |      |      |      |      |      |      |
|-----------------------------------------------------|-------|-------|-----|------|------|------|------|------|------|------|------|------|------|
| F.V/TIME                                            | 30min | 60min | 2h  | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  | 24h  | 48h  | 50h  |
| 1.65V                                               | 304   | 199   | 132 | 98.6 | 83.1 | 71.1 | 60.7 | 46.2 | 38.4 | 20.3 | 18.7 | 9.94 | 8.32 |
| 1.70v                                               | 295   | 194   | 130 | 97.9 | 82.5 | 70.6 | 60.3 | 45.9 | 38.3 | 20.3 | 18.5 | 9.90 | 8.28 |
| 1.75v                                               | 288   | 190   | 129 | 97.2 | 81.9 | 70.1 | 59.9 | 45.5 | 38.0 | 20.1 | 18.5 | 9.85 | 8.02 |
| 1.80v                                               | 277   | 184   | 125 | 94.3 | 79.5 | 68.0 | 58.1 | 44.2 | 37.8 | 20.0 | 18.4 | 9.78 | 7.76 |
| 1.85v                                               | 258   | 172   | 120 | 89.4 | 75.4 | 64.5 | 55.1 | 41.9 | 36.3 | 19.2 | 17.7 | 9.53 | 7.31 |

## PARAMETERS FOR SOLAR & WIND APPLICATIONS

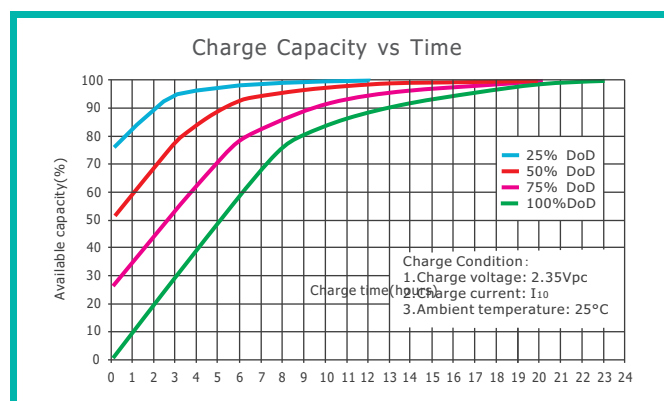
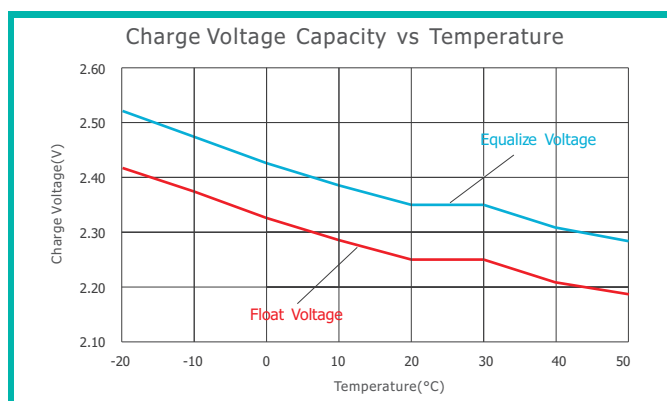
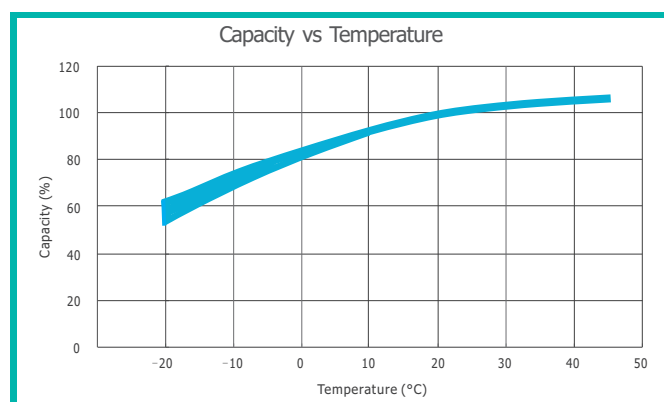
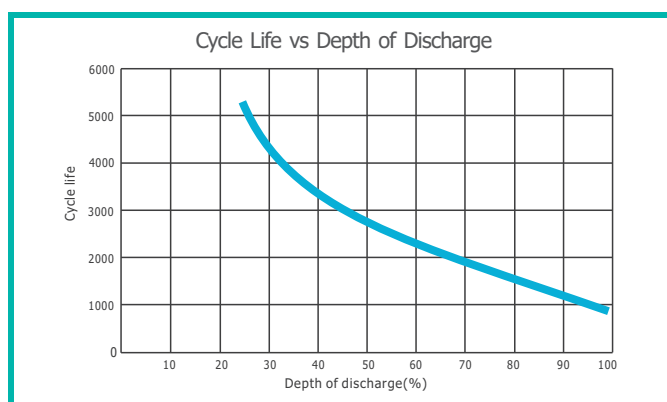
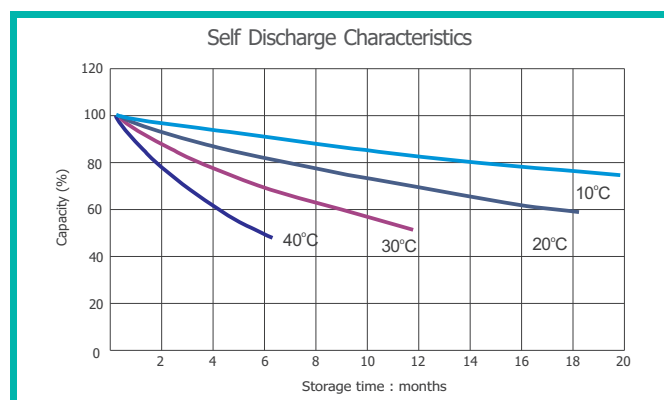
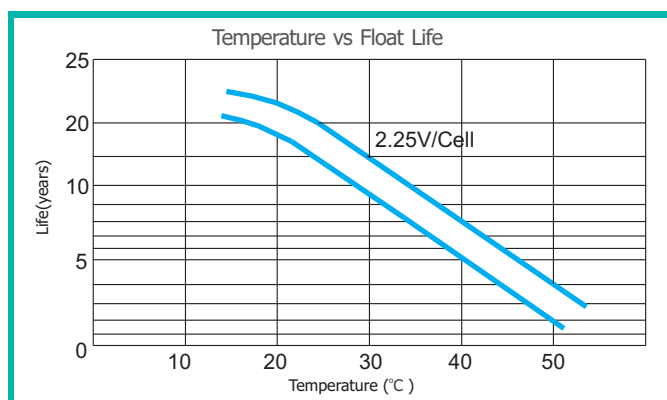
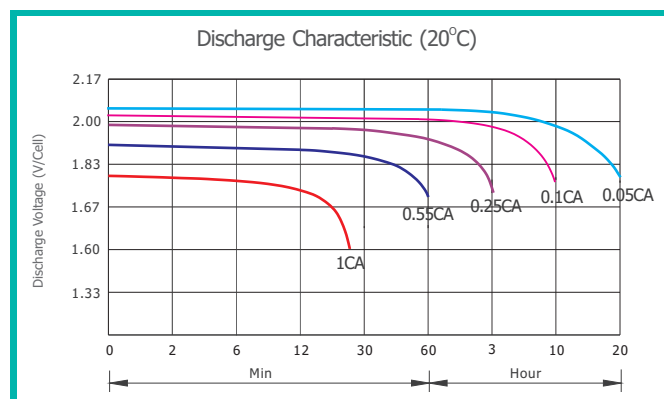
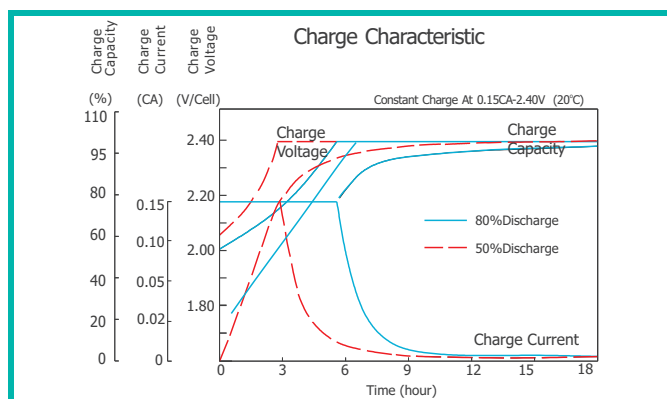
### Long time discharge capacity for Solar & Wind applications

| Capacity      | C <sub>20</sub><br>(Ah) | C <sub>24</sub><br>(Ah) | C <sub>48</sub><br>(Ah) | C <sub>72</sub><br>(Ah) | C <sub>100</sub><br>(Ah) | C <sub>120</sub><br>(Ah) | C <sub>240</sub><br>(Ah) |
|---------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| OPzV12-200    | 216                     | 220                     | 230                     | 240                     | 250                      | 254                      | 260                      |
| Final Voltage | 1.80V                   |                         |                         |                         |                          |                          |                          |

### Solar & Wind applications parameters settings

|                               |                            |
|-------------------------------|----------------------------|
| Over voltage disconnect:      | 2.45±0.01V/cell @ 20~25°C  |
| Regulation/equalize voltage:  | 2.40±0.01V/cell @ 20~25°C  |
| Array reconnection voltage:   | 2.25±0.005V/cell @ 20~25°C |
| Float voltage setting:        | 2.27±0.005V/cell @ 20~25°C |
| Low voltage alarm voltage:    | 1.95±0.005V/cell @ 20~25°C |
| Low voltage disconnect:       | 1.90±0.005V/cell @ 20~25°C |
| Load reconnect voltage:       | 2.09±0.01V/cell @ 20~25°C  |
| Temp. compensate coefficient: | -5mV/cell/°C               |

## CHARACTERISTICS



## FINAL VOLTAGE SETTINGS RECOMMENDED ACCORDING TO THE DISCHARGE CURRENT

| Discharge Current I (A) | I < 0.05C | 0.05C ≤ I < 0.08C | 0.08C ≤ I < 0.2C | 0.2C ≤ I < 0.6C | 0.6C ≤ I < 1.0C | 1C ≤ I ≤ 2C |
|-------------------------|-----------|-------------------|------------------|-----------------|-----------------|-------------|
| Final of Voltage        | ≥1.90 Vpc | ≥1.85 Vpc         | ≥1.80 Vpc        | ≥1.75 Vpc       | ≥1.7 Vpc        | ≥1.6 Vpc    |