

# OPzV Series

## 12V 2 OPzV 100 12V100Ah

Sacred Sun OPzV series are valve regulated lead-acid cells which use a combination of tubular positive plate woven gauntlets, pasted negative plate design and gel electrolyte using advanced filling techniques in production which assure superior service life and excellent battery reliability. The battery has excellent cyclic performance and charge acceptance ability. It can be used in high-low temperature environment and poor grid condition.

### Benefits

- Very long life according to EUROBAT Classification
- 1500+ cycles at 80% DOD
- High rate discharge performance
- High gas recombination efficiency
- Maximum charge efficiency
- GEL state electrolyte prevents leakage and layering
- Low resistance PVC or PF micro-porous separator ensures low self-discharge rate
- Vertical installation

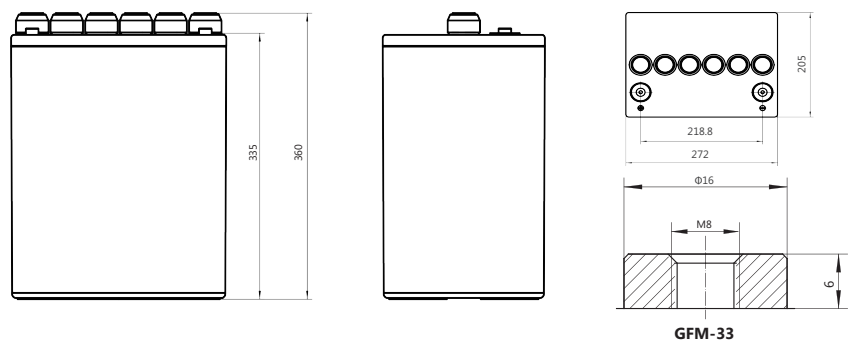
### Drawing

### Applications

- Telecommunications
- Energy storage system
- Hybrid power system
- Power system
- UPS

### Standards

- IEC 60896-21/22
- IEC 61427
- DIN 43539-T5
- DIN 40742
- EUROBAT guide



### Specifications

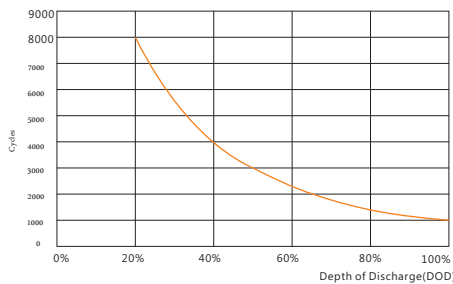
|                                      |   |                  |                       |                  |
|--------------------------------------|---|------------------|-----------------------|------------------|
| Battery Model                        | 12V 2 OPzV 100  |                  |                       |                  |
| Design Life (years, 25°C)            | 15  |                  |                       |                  |
| Capacity (Ah, 25°C)                  | 10HR (10A, 1.80V)   | 5HR (17A, 1.80V) | 3HR (25A, 1.80V)      | 1HR (50A, 1.80V) |
|                                      | 100   | 85               | 75                    | 50               |
| Dimensions (mm)                      | Length  | Width            | Height                | Total Height     |
|                                      | 272   | 205              | 335                   | 360              |
| Approx. Weight (kg)                  | 50.0  |                  |                       |                  |
| Reference Internal Resistance (mΩ)   | 6.69 ±15% (fully charged @ 25°C, Testing device: HIOKIBT3562) |                  |                       |                  |
| Maximum Discharge Current (A/3 Sec.) | 675   |                  |                       |                  |
| Self-Discharge (25°C)                | ≤ 3% per month  |                  |                       |                  |
| Charge Voltage (V/cell, 25°C)        | Cycle use   |                  | Float use             |                  |
|                                      | 2.35 (-3.5mV/°C/cell), max charge current: 20A                |                  | 2.25 (-3.5mV/°C/cell) |                  |
| Short Circuit Current (A)            | 1520  |                  |                       |                  |

## Discharge Data

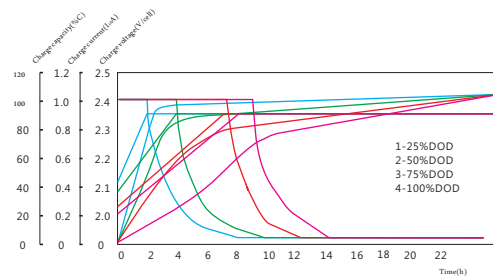
| Constant Current Discharge Data (25°C, A) |     |     |     |     |    |    |      |      |      |      |      |      |     |      |      |      |      |      |
|---|-----|-----|-----|-----|----|----|------|------|------|------|------|------|-----|------|------|------|------|------|
| End Voltage (V/cell)                      | min |     |     |     |    | h  |      |      |      |      |      |      |     |      |      |      |      |      |
|   | 5   | 10  | 15  | 20  | 30 | 1  | 2    | 3    | 5    | 6    | 8    | 10   | 20  | 24   | 48   | 100  | 120  | 240  |
| 1.65                                      | 151 | 135 | 118 | 103 | 87 | 57 | 37.8 | 29.5 | 19.3 | 16.8 | 13.3 | 11.7 | 6.0 | 5.13 | 2.60 | 1.29 | 1.09 | 0.56 |
| 1.70                                      | 141 | 127 | 109 | 99  | 85 | 55 | 35.5 | 27.9 | 18.7 | 16.3 | 12.7 | 11.0 | 5.8 | 5.07 | 2.59 | 1.27 | 1.07 | 0.55 |
| 1.75                                      | 135 | 121 | 107 | 96  | 80 | 53 | 33.6 | 26.4 | 17.9 | 15.5 | 12.3 | 10.5 | 5.6 | 5.00 | 2.58 | 1.25 | 1.05 | 0.54 |
| 1.80                                      | 127 | 115 | 101 | 90  | 77 | 50 | 31.8 | 25.0 | 17.0 | 14.9 | 11.7 | 10.0 | 5.3 | 4.93 | 2.52 | 1.23 | 1.03 | 0.53 |
| 1.85                                      | 120 | 109 | 96  | 85  | 73 | 47 | 30.1 | 23.7 | 16.3 | 14.4 | 11.1 | 9.6  | 5.1 | 4.70 | 2.45 | 1.20 | 1.01 | 0.52 |

| Constant Power Discharge Data (25°C, W/cell) |     |     |     |     |     |       |      |      |      |      |      |      |      |       |      |      |      |      |
|--|-----|-----|-----|-----|-----|-------|------|------|------|------|------|------|------|-------|------|------|------|------|
| End Voltage (V/cell)                         | min |     |     |     |     | h     |      |      |      |      |      |      |      |       |      |      |      |      |
|  | 5   | 10  | 15  | 20  | 30  | 1     | 2    | 3    | 5    | 6    | 8    | 10   | 20   | 24    | 48   | 100  | 120  | 240  |
| 1.65   | 250 | 245 | 226 | 210 | 172 | 115.0 | 75.0 | 59.0 | 38.4 | 33.6 | 26.6 | 23.3 | 11.9 | 10.30 | 5.20 | 2.57 | 2.18 | 1.12 |
| 1.70   | 232 | 227 | 212 | 192 | 165 | 111.0 | 70.6 | 56.1 | 37.2 | 32.2 | 25.4 | 22.0 | 11.6 | 10.14 | 5.18 | 2.54 | 2.14 | 1.09 |
| 1.75   | 212 | 208 | 195 | 180 | 155 | 105.0 | 66.8 | 55.2 | 35.6 | 31.0 | 24.6 | 21.0 | 11.1 | 10.00 | 5.15 | 2.50 | 2.10 | 1.07 |
| 1.80   | 192 | 189 | 172 | 158 | 140 | 100.0 | 63.5 | 49.8 | 33.8 | 29.6 | 23.4 | 19.9 | 10.5 | 9.85  | 5.03 | 2.46 | 2.06 | 1.05 |
| 1.85   | 185 | 160 | 145 | 137 | 119 | 95.0  | 60.2 | 47.2 | 32.6 | 28.6 | 22.2 | 18.6 | 10.2 | 9.40  | 4.89 | 2.40 | 2.02 | 1.03 |

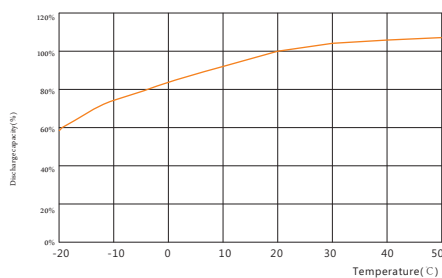
## Performance Curve



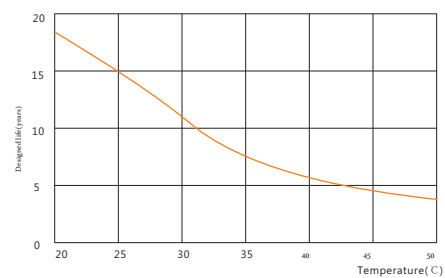
Cycle life vs. discharge depth



Charge vs. discharge depth



Capacity vs. temperature



Design life vs. temperature

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