

OPzV Deep Cycle Tubular GEL Battery

60PzV420

CSBattery OPzV series Tubular GEL battery is with 25 years floating design life, it is a Valve Regulated Tubular Gel battery that adopts immobilized GEL and Tubular Plate technology to offer high reliability and performance. The Battery is designed and manufactured according to DIN standards and with die-casting positive grid and patent formula of active material. OPzV series exceeds DIN standard values with more than 25 years floating design life at 25°C and is even more suitable for cyclic use under extreme operating conditions.

2V
420Ah

GEL
Technology

Tubular
Plate



Applications

- Solar & Wind Power system
- Nuclear power station
- Telecom backup power supply
- energysaving requirements
Emergency Power System

General Features

- ✓ It can discharge at -40°C~70°C, Charge at 0-50°C
- ✓ Long life expectancy of 20+ years in floating condition
- ✓ Adopts quality silicon nano gel electrolyte
- ✓ Excellent deep discharge recovery capability
- ✓ Deep cycle performance: up to 3300

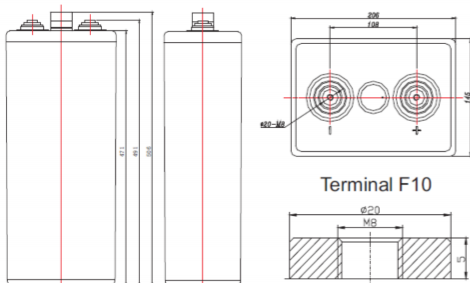
Complied Standards



Dimensions & Weight

| | |
|-----------------------|-----------|
| Length(mm/inch) | 145/4.06 |
| Width(mm/inch) | 206/8.11 |
| Height(mm/inch) | 491/19.33 |
| Total Height(mm/inch) | 506/19.92 |
| Weight(kg/lbs)(±3%) | 32/70.7 |

Unit: mm Dimension: 145(L) × 206(W) × 506(H)



Technical Specifications

| Nominal Voltage | | 2V(Single Cell) |
|---|----------------------------|---|
| Design Floating Life @25°C | | 25 Years |
| Nominal Capacity @25°C (10 hour rate@42.0A, 1.8V) | | 420Ah |
| Capacity @25°C | 20hour rate (22.05A, 1.8V) | 441Ah |
| | 5 hour rate (71.4A, 1.75V) | 357Ah |
| | 1 hour rate (265.4A, 1.6V) | 265.4Ah |
| Internal Resistance | Full Charged Battery@25°C | ≤0.38mΩ |
| Ambient Temperature | Discharge | -40°C~70°C |
| | Charge | -0°C~50°C |
| | Storage | -20°C~60°C |
| Max.Discharge Current@25°C | | 1700A (5s) |
| Capacity affected by Temperature (10 hour) | 40°C | 105% |
| | 25°C | 100% |
| | 0°C | 89% |
| | -15°C | 79% |
| Self-Discharge@25°C per Month | | 2% |
| Charge (Constant Voltage) @25°C | Standby Use | Initial Charging Current Less than 84.0A Voltage 2.25-2.3V |
| | Cycle Use | Initial Charging Current Less than 84.0A Voltage 2.37-2.4V |

Battery Discharge Table

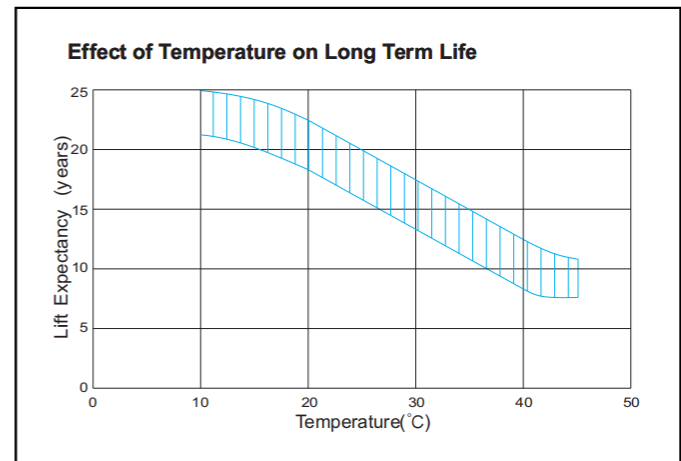
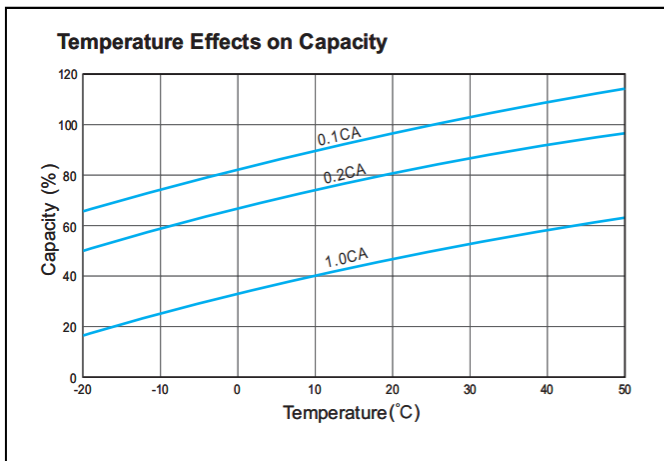
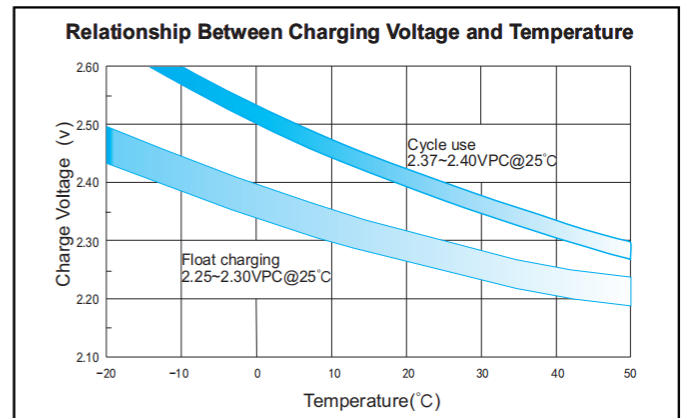
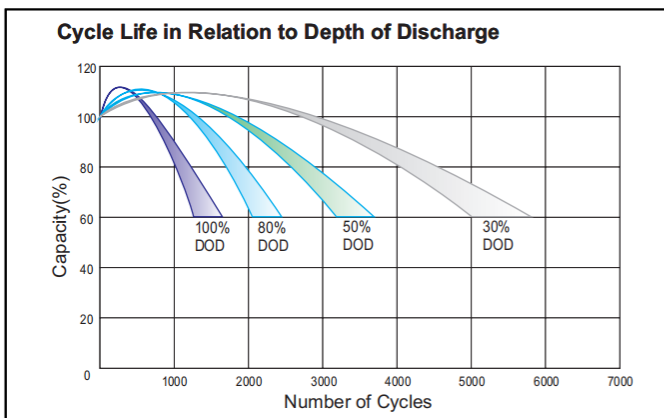
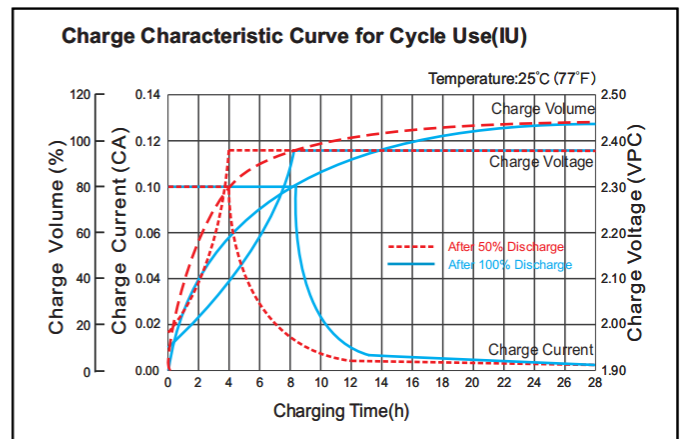
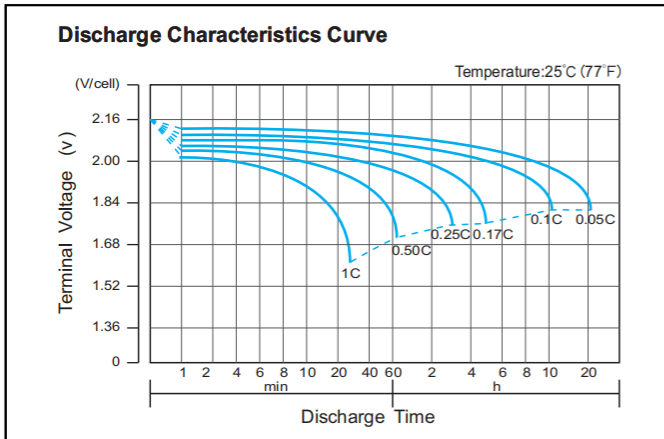
Discharge Constant Current per Cell (Amperes at 25° C)

| F.V/ Time | 30min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|-----------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1.90 | 206.60 | 163.80 | 115.50 | 87.59 | 71.82 | 62.06 | 55.86 | 43.59 | 37.38 | 19.62 |
| 1.87 | 231.00 | 180.60 | 123.90 | 92.89 | 75.81 | 65.28 | 59.22 | 45.63 | 39.06 | 20.51 |
| 1.83 | 264.60 | 201.60 | 134.40 | 99.00 | 79.80 | 68.11 | 61.32 | 47.67 | 40.74 | 21.39 |
| 1.80 | 294.00 | 218.40 | 139.40 | 101.90 | 81.40 | 69.72 | 63.00 | 48.89 | 42.00 | 22.05 |
| 1.75 | 327.60 | 233.90 | 145.70 | 105.90 | 82.74 | 71.40 | 64.26 | 49.70 | 42.84 | 22.49 |
| 1.70 | 361.20 | 241.50 | 149.90 | 108.00 | 84.19 | 72.24 | 65.10 | 50.11 | 43.26 | 22.71 |
| 1.65 | 372.50 | 256.60 | 155.00 | 110.90 | 85.39 | 73.08 | 65.94 | 50.52 | 43.68 | 22.93 |
| 1.60 | 388.50 | 265.40 | 160.90 | 115.50 | 87.78 | 74.34 | 66.78 | 50.93 | 44.10 | 23.15 |

Discharge Constant Power per Cell (Watts at 25° C)

| F.V/ Time | 30min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|-----------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1.90 | 395.50 | 314.50 | 223.30 | 169.70 | 140.60 | 122.20 | 110.50 | 87.18 | 76.18 | 40.00 |
| 1.87 | 435.20 | 341.50 | 236.80 | 177.70 | 148.20 | 128.10 | 116.80 | 90.85 | 79.44 | 41.71 |
| 1.83 | 487.50 | 372.30 | 252.00 | 187.00 | 155.30 | 133.10 | 120.50 | 94.11 | 82.29 | 43.20 |
| 1.80 | 532.70 | 397.20 | 260.40 | 191.20 | 158.30 | 136.10 | 123.50 | 96.15 | 84.33 | 44.27 |
| 1.75 | 577.90 | 414.90 | 268.90 | 197.10 | 160.40 | 139.40 | 125.60 | 97.37 | 85.55 | 44.92 |
| 1.70 | 619.60 | 419.10 | 275.60 | 200.50 | 162.90 | 140.70 | 126.80 | 98.18 | 86.37 | 45.34 |
| 1.65 | 630.20 | 437.70 | 283.20 | 204.70 | 165.00 | 142.00 | 128.10 | 99.00 | 86.78 | 45.56 |
| 1.60 | 637.80 | 451.20 | 290.00 | 211.50 | 169.30 | 143.20 | 128.90 | 99.41 | 87.18 | 45.77 |

Performance Characteristics



Battery Discharge Capacity

| Long time discharge capacity for solar/wind application | | | | | | |
|---|-------------|----------|----------|-----------|-----------|-----------|
| Capacity | C24 (Ah) | C48 (Ah) | C72 (Ah) | C100 (Ah) | C120 (Ah) | C240 (Ah) |
| Model | F.V=1.85VPC | | | | | |
| OPzV2-420 | 472 | 525 | 530 | 540 | 550 | 559 |

Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact **CSBattery** for the latest information.

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