

UP-OPzS Series

12 OPzS 1200

O P z S C E L L



Main Features

- **Design Life**
20 years at 20°C.
- **Water Refilling**
More than 2 years at 20°C.
- **IIEC 896-1**
2300 cycles.
- **Self Discharge**
Approx. 2% per month at 20°C.
- **Operating Temperature Range**
-20°C to 55°C, recommended 10°C to 30°C.
- **Full Conformity with**
DIN 40737-1, IIEC 896-11 and EN 50272-2.

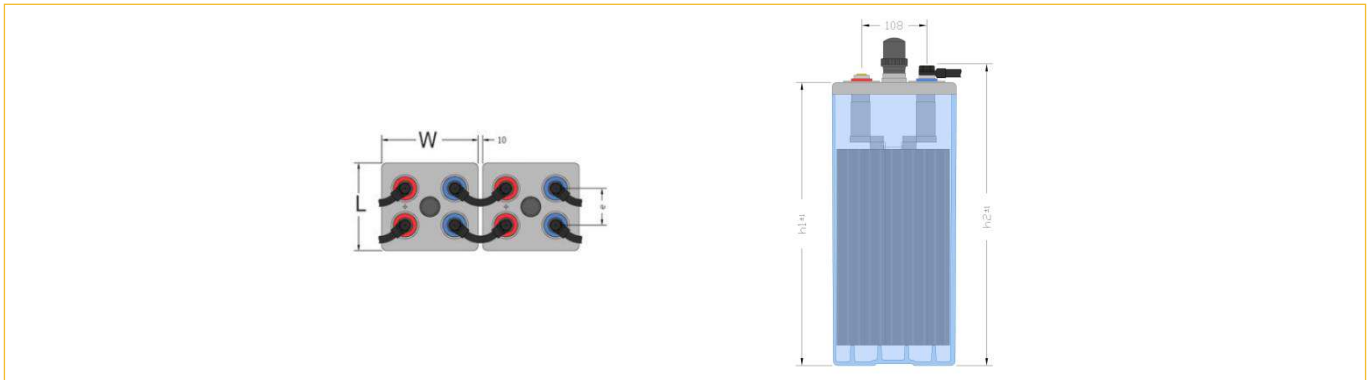
Technical Specifications

| | |
|--|------------------------|
| Capacity (Ah), C100 (1,85 V/cell, 20°C) | 2168 |
| Capacity (Ah), C10 (1,80 V/cell, 20°C) | 1446 |
| Number of Plates (+) per Cell | 12 |
| Floating Voltage Set Point (V/cell) | 2.23 |
| Maximum Initial Charge Current (A) | 0.3 C10 |
| Recommended Boost Charge Voltage (V/cell) | 2.40 |
| Recommended End of Discharge Voltage (10-hr rate) (V/cell) | 1.80 |
| Short Circuit Current (A) | 9250 |
| Internal Resistance (mOhm) | 0.220 |
| Number of Cycles at 60% Depth of Discharge (20°C) | 2300 |
| Self-Discharge Rate per Month at 20°C | Approx. 2.5% |
| Dimensions in mm (L x W x H1 / H2) H1 = Height to the lid H2 = Height including connectors & bolts | 275 x 210 x 646 x 674 |
| Weight (kg) | Wet: 91.9 / Dry: 66.8 |
| Type and Number of Poles | M10 / 4 |
| Operating Temperature / Recommended Temperature | -20°C-55°C / 10°C-30°C |

* All dimensions and weights shown are subject to manufacturing tolerances.



Dimensions



Constant Current Discharge in A (at 20°C)

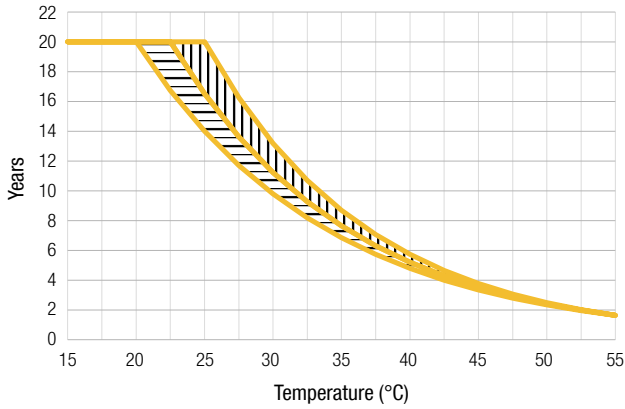
| End Voltage (V/cell) | Discharge Time | | | | | | | | | | | | | | |
|----------------------|----------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 7h | 8h | 10h | 12h | 20h |
| 1.60 V | 1526.2 | 1416.7 | 1145.8 | 950.1 | 808.9 | 516.6 | 388.7 | 315.2 | 266.6 | 232.0 | 205.9 | 185.4 | 155.4 | 134.3 | 88.3 |
| 1.65 V | 1370.9 | 1282.2 | 1064.2 | 901.1 | 779.2 | 508.1 | 383.9 | 311.9 | 264.0 | 229.8 | 204.1 | 183.9 | 154.2 | 133.2 | 87.7 |
| 1.70 V | 1208.4 | 1138.4 | 966.2 | 834.3 | 732.3 | 493.5 | 376.3 | 306.8 | 260.2 | 226.7 | 201.5 | 181.6 | 152.4 | 131.8 | 86.8 |
| 1.75 V | 1040.0 | 987.6 | 853.3 | 750.3 | 668.3 | 467.0 | 362.4 | 297.7 | 253.6 | 221.6 | 197.3 | 178.1 | 149.7 | 129.6 | 85.5 |
| 1.80 V | 855.5 | 831.4 | 728.8 | 650.3 | 587.4 | 425.7 | 336.9 | 280.2 | 240.7 | 211.6 | 189.1 | 171.3 | 144.6 | 125.5 | 83.3 |
| 1.83 V | 731.8 | 726.4 | 649.6 | 583.9 | 531.2 | 393.5 | 315.1 | 264.1 | 228.1 | 201.4 | 180.7 | 164.1 | 139.1 | 121.1 | 80.9 |
| 1.85 V | 661.8 | 657.1 | 595.1 | 537.3 | 491.1 | 368.8 | 297.7 | 250.9 | 217.6 | 192.7 | 173.2 | 157.6 | 134.1 | 117.0 | 78.6 |
| 1.87 V | 575.9 | 571.1 | 539.7 | 489.5 | 448.9 | 341.5 | 278.0 | 235.6 | 205.2 | 182.3 | 164.3 | 149.8 | 127.8 | 111.8 | 75.5 |
| 1.90 V | 461.4 | 458.5 | 444.9 | 415.1 | 382.8 | 296.0 | 243.8 | 208.5 | 182.8 | 163.2 | 147.7 | 135.2 | 115.9 | 101.8 | 69.4 |

Constant Power Discharge in W/cell (at 20°C)

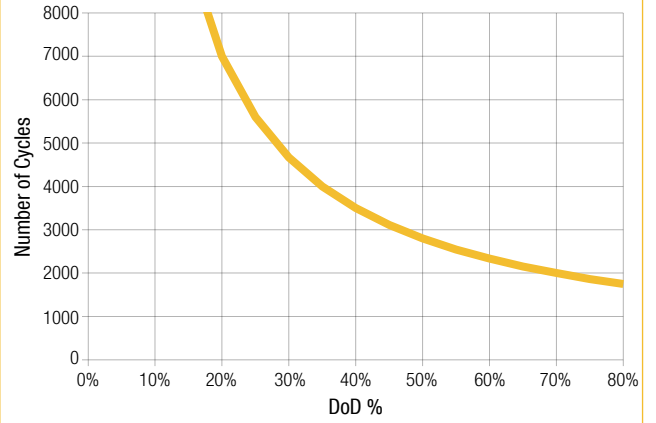
| End Voltage (V/cell) | Discharge Time | | | | | | | | | | | | | | |
|----------------------|----------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 7h | 8h | 10h | 12h | 20h |
| 1.60 V | 2419.4 | 2259.9 | 1876.4 | 1596.4 | 1387.9 | 925.9 | 710.0 | 582.3 | 496.2 | 434.0 | 386.8 | 349.6 | 294.5 | 255.4 | 169.5 |
| 1.65 V | 2239.1 | 2102.8 | 1774.7 | 1530.1 | 1344.4 | 912.6 | 702.6 | 577.0 | 492.0 | 430.6 | 383.9 | 347.1 | 292.5 | 253.7 | 168.4 |
| 1.70 V | 2035.6 | 1920.7 | 1645.7 | 1438.2 | 1276.9 | 889.1 | 690.1 | 568.6 | 485.8 | 425.6 | 379.7 | 343.5 | 289.6 | 251.3 | 167.0 |
| 1.75 V | 1809.5 | 1715.1 | 1489.0 | 1318.1 | 1183.2 | 846.7 | 666.9 | 553.3 | 474.6 | 416.9 | 372.6 | 337.4 | 285.0 | 247.6 | 164.8 |
| 1.80 V | 1532.2 | 1485.2 | 1304.7 | 1168.1 | 1059.8 | 780.5 | 624.5 | 523.5 | 452.4 | 399.5 | 358.4 | 325.5 | 276.1 | 240.5 | 160.9 |
| 1.83 V | 1360.9 | 1335.5 | 1181.1 | 1064.0 | 970.9 | 727.7 | 588.0 | 496.0 | 430.7 | 381.8 | 343.6 | 312.9 | 266.4 | 232.7 | 156.7 |
| 1.85 V | 1227.2 | 1203.6 | 1093.6 | 989.1 | 905.6 | 686.5 | 558.5 | 473.3 | 412.4 | 366.4 | 330.5 | 301.4 | 257.3 | 225.2 | 152.5 |
| 1.87 V | 1090.0 | 1083.0 | 1002.3 | 909.8 | 835.8 | 640.3 | 524.4 | 446.7 | 390.6 | 348.0 | 314.5 | 287.4 | 246.1 | 215.8 | 146.9 |
| 1.90 V | 869.2 | 865.3 | 851.3 | 783.1 | 722.8 | 561.4 | 464.5 | 398.7 | 350.7 | 313.9 | 284.7 | 261.0 | 224.5 | 197.6 | 135.7 |

* Upower reserves the right to change or revise without notice any information or detail given in this publication.

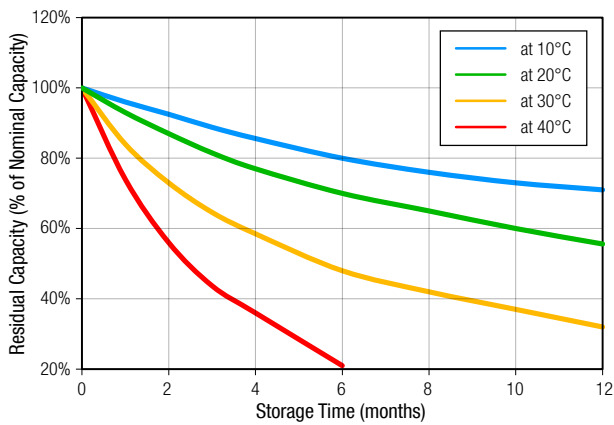
Expected Service Life vs. Operating Temperature



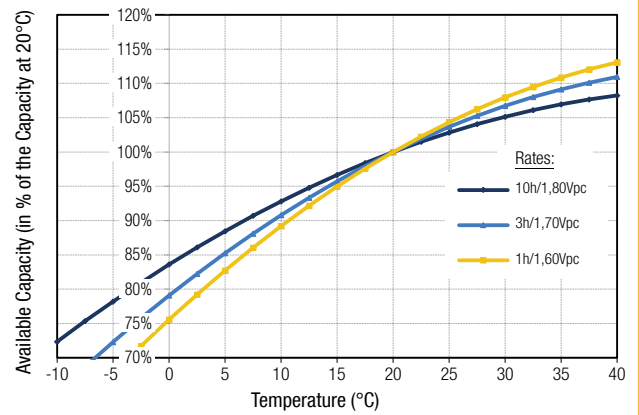
Number of Cycles vs. DOD



Self-Discharge Characteristics



Capacity vs. Temperature



Float Voltage Setting vs. Operating Temperature

