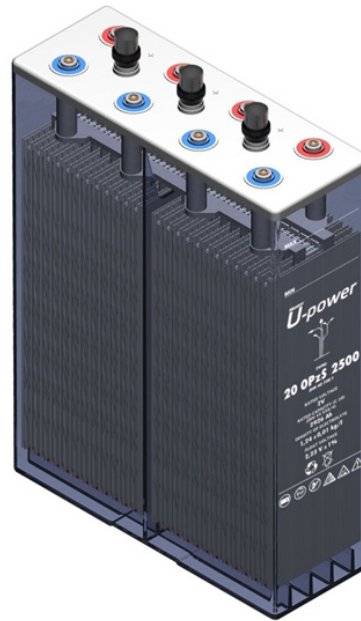


UP-OPzS Series

20 OPzS 2500

O P z S C E L L



Main Features

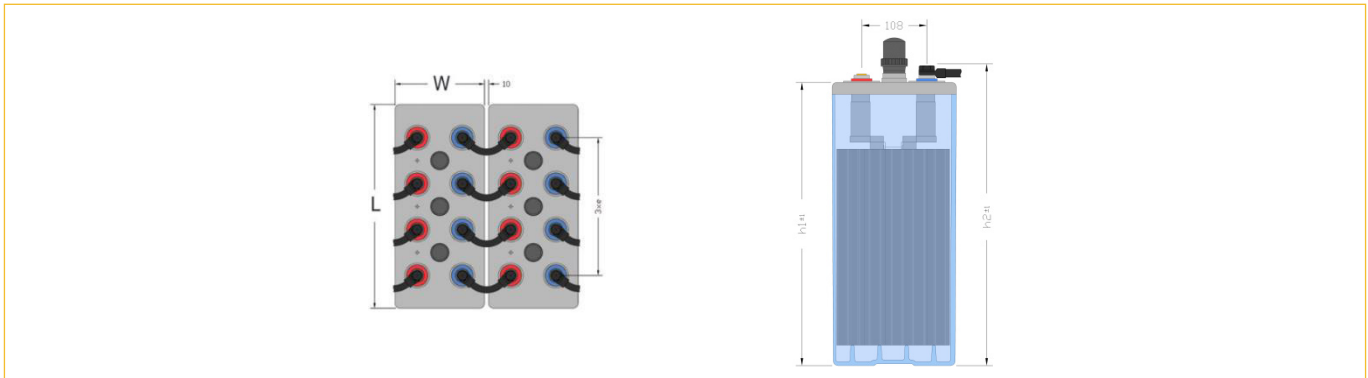
- **Design Life**
20 years at 20°C.
- **Water Refilling**
More than 2 years at 20°C.
- **IIEC 896-1**
2300 cycles.
- **Self Discharge**
Approx. 2% per month at 20°C.
- **Operating Temperature Range**
-20°C to 55°C, recommended 10°C to 30°C.
- **Full Conformity with**
DIN 40737-1, IIEC 896-11 and EN 50272-2.

Technical Specifications

| | |
|--|-------------------------|
| Capacity (Ah), C100 (1,85 V/cell, 20°C) | 4150 |
| Capacity (Ah), C10 (1,80 V/cell, 20°C) | 3060 |
| Number of Plates (+) per Cell | 20 |
| 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) | 16550 |
| Internal Resistance (mOhm) | 0.122 |
| 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 | 487 x 212 x 772 x 800 |
| Weight (kg) | Wet: 194.1 / Dry: 139.6 |
| Type and Number of Poles | M10 / 8 |
| 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)

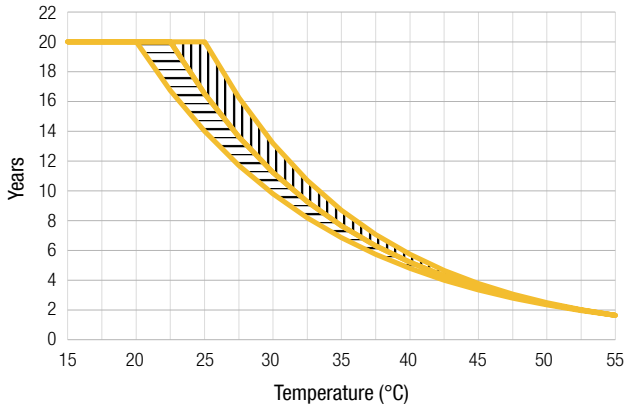
| End Voltage (V/cell) | Discharge Time | | | | | | | | | | | | | | |
|----------------------|----------------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 7h | 8h | 10h | 12h | 20h |
| 1.60 V | 2831.1 | 2693.3 | 2327.0 | 2016.7 | 1763.2 | 1148.4 | 856.6 | 689.5 | 580.6 | 503.5 | 445.6 | 400.4 | 334.2 | 287.7 | 187.4 |
| 1.65 V | 2522.4 | 2409.9 | 2110.8 | 1859.9 | 1650.1 | 1115.5 | 841.1 | 679.6 | 573.5 | 497.8 | 440.9 | 396.4 | 331.1 | 285.1 | 185.9 |
| 1.70 V | 2205.1 | 2119.6 | 1879.2 | 1679.2 | 1510.1 | 1061.1 | 815.2 | 664.0 | 562.4 | 489.3 | 434.0 | 390.6 | 326.7 | 281.6 | 183.9 |
| 1.75 V | 1872.5 | 1821.6 | 1633.9 | 1476.6 | 1344.1 | 979.6 | 769.8 | 635.8 | 542.9 | 474.7 | 422.4 | 381.0 | 319.6 | 276.0 | 180.8 |
| 1.80 V | 1518.2 | 1506.9 | 1378.3 | 1257.7 | 1156.1 | 871.9 | 700.3 | 587.1 | 506.8 | 446.7 | 399.9 | 362.4 | 306.0 | 265.4 | 175.4 |
| 1.83 V | 1295.3 | 1281.7 | 1221.8 | 1119.5 | 1034.4 | 794.8 | 647.0 | 547.2 | 475.3 | 421.0 | 378.5 | 344.1 | 292.0 | 254.3 | 169.6 |
| 1.85 V | 1164.3 | 1158.3 | 1113.4 | 1025.6 | 950.3 | 738.2 | 606.3 | 516.0 | 450.2 | 400.1 | 360.6 | 328.6 | 279.8 | 244.3 | 164.0 |
| 1.87 V | 1022.4 | 1010.7 | 991.2 | 929.4 | 863.8 | 678.1 | 561.5 | 480.8 | 421.5 | 375.9 | 339.8 | 310.3 | 265.2 | 232.1 | 156.9 |
| 1.90 V | 811.7 | 808.0 | 794.7 | 774.7 | 730.6 | 581.9 | 487.2 | 420.8 | 371.4 | 333.1 | 302.4 | 277.3 | 238.3 | 209.6 | 143.4 |

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

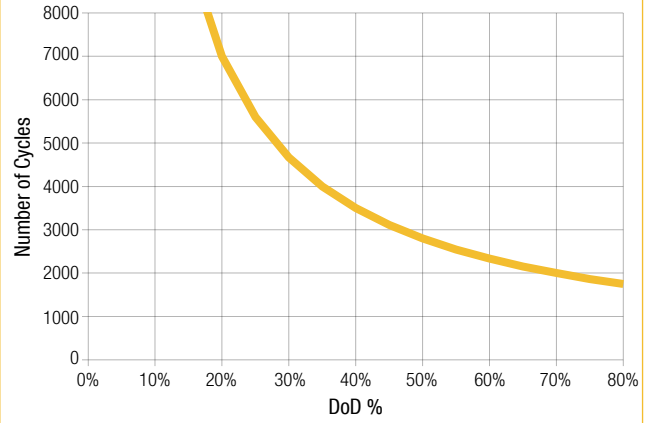
| End Voltage (V/cell) | Discharge Time | | | | | | | | | | | | | | |
|----------------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 7h | 8h | 10h | 12h | 20h |
| 1.60 V | 4477.0 | 4273.7 | 3742.5 | 3300.4 | 2936.9 | 2014.1 | 1540.5 | 1258.0 | 1069.5 | 933.7 | 830.6 | 749.5 | 629.4 | 544.3 | 358.3 |
| 1.65 V | 4122.0 | 3941.4 | 3483.8 | 3103.9 | 2788.0 | 1963.7 | 1516.2 | 1242.5 | 1058.2 | 924.7 | 823.3 | 743.2 | 624.5 | 540.2 | 355.9 |
| 1.70 V | 3710.0 | 3575.2 | 3184.1 | 2864.2 | 2597.5 | 1880.6 | 1474.5 | 1217.0 | 1040.2 | 910.9 | 812.0 | 733.7 | 617.3 | 534.4 | 352.6 |
| 1.75 V | 3233.6 | 3170.3 | 2844.9 | 2581.9 | 2361.7 | 1756.3 | 1401.4 | 1170.1 | 1007.3 | 886.1 | 792.3 | 717.4 | 605.2 | 524.9 | 347.4 |
| 1.80 V | 2705.5 | 2679.0 | 2466.3 | 2254.8 | 2079.0 | 1587.6 | 1288.8 | 1089.3 | 946.2 | 838.1 | 753.5 | 685.2 | 581.5 | 506.4 | 337.8 |
| 1.83 V | 2392.7 | 2380.9 | 2221.4 | 2038.6 | 1887.4 | 1462.9 | 1200.7 | 1022.3 | 892.7 | 794.1 | 716.3 | 653.2 | 556.9 | 486.7 | 327.4 |
| 1.85 V | 2157.7 | 2147.4 | 2049.8 | 1887.0 | 1750.5 | 1369.6 | 1132.3 | 969.1 | 849.5 | 757.8 | 685.1 | 626.0 | 535.3 | 468.8 | 317.4 |
| 1.87 V | 1916.8 | 1907.9 | 1866.1 | 1727.9 | 1607.4 | 1268.4 | 1055.9 | 908.5 | 799.5 | 715.4 | 648.3 | 593.6 | 509.2 | 447.1 | 304.5 |
| 1.90 V | 1537.5 | 1526.7 | 1508.6 | 1472.3 | 1379.9 | 1102.3 | 926.4 | 802.9 | 710.8 | 639.1 | 581.5 | 534.1 | 460.6 | 406.1 | 279.6 |

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

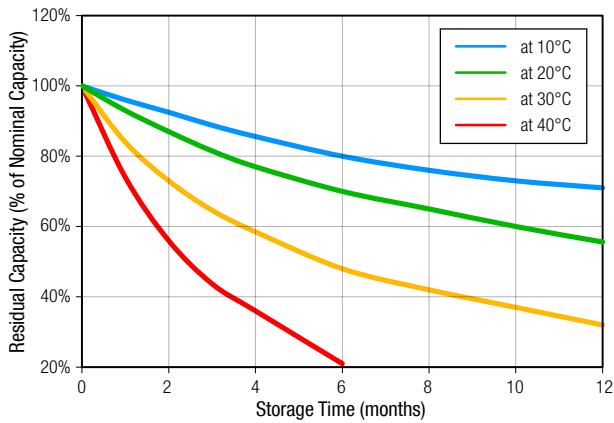
Expected Service Life vs. Operating Temperature



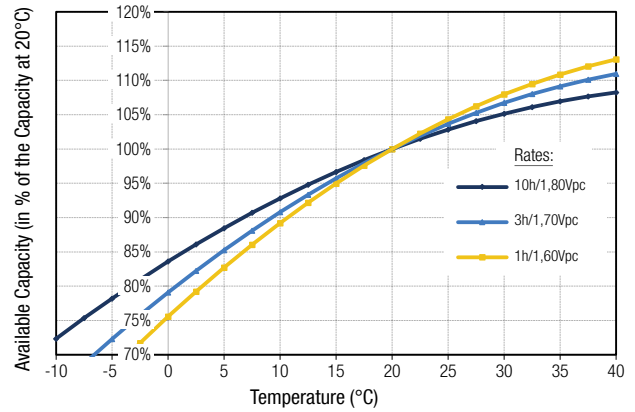
Number of Cycles vs. DOD



Self-Discharge Characteristics



Capacity vs. Temperature



Float Voltage Setting vs. Operating Temperature

