EverExceed®
power your applications

## Ultra High Rate Discharge Battery Series

# Ultra High Rate Range VRLA

### Unique performance for high rate discharge


### Premium quality for uninterruptible application

### 12 years of design life

# Ultra High Rate discharge VRLA battery

The extremely powerful, compact AGM batteries of EverExceed Ultra High Rate Range are an ideal power solution for Uninterruptible Power Supply (UPS), emergency lighting, switchgear, telecom and other high rate emergency battery backup required applications. The EverExceed Ultra High Rate Range VRLA batteries provides high performance and reliability in fast discharge applications. Our development team combines the market's demand with design optimization, precision component selection and state-of-the-art manufacturing process to produce the most cost effective battery solution for today's applications.

**Applicable Operating temperature range:**
-40°C(-40°F) to +70°C(+158°F)
Ideal Operating temperature range:
+20°C(+68°F) to +28°C(+82.4°F)
Storage time from a fully charged condition:
12 months at 20°C~25°C / 68°F~77°F.
For each 9°C / 15°F rise, reduce the storage time by half.

**Ultra High Rate Range VRLA**


**21-880W**

## Innovative Features

- 12 years design life @ 25˚C(77˚F);
- Ultra high energy density designed, specially for high current and high power discharge UPS system;
- Valve regulated lead acid battery (VRLA);
- High-Compression Absorbed Glass Mat technology (AGM) for greater than 99% recombination efficiency;
- Proprietary Fixed Orifice Plate Pasting technology applying active materials on both sides of the grid for consistent cell-to-cell performance and higher capacity;
- Heavy duty threaded copper alloy terminals for ease of assembly, reduced maintenance and increased safety.
- Advanced high tin low calcium lead alloy, minimizing plate grid corrosion and promotes long battery life.
- Flame arresting, low pressure safety release venting system for individual cells, recognized per U.L. 94V0.
- Horizontal or vertical operation.
- One-way fire proof relief valve, Explosion Resistant.
- Patented long life alloy having the lowest calcium levels industry minimizing grid growth and reducing gassing;
- Standard: Reinforced ABS (UL 94HB) container
- Optional: Flame-retardant reinforced ABS case and cover compliant with U.L.94 V-0 with an Oxygen Limiting Index of greater than 28%.
- Slow self discharge rate: <3%/month;

## Designed in Quality Manufacturing

Quality manufacturing processes for the Ultra High Rate Range batteries incorporate the industry most advanced technologies including: an automated sealing detection system, a computer controlled “fill by weight” acid filler, and a temperature controlled water bath formation process. Each and every unit is capacity tested.

## No transport restrictions

Surface transport: Classified as non-hazardous material as related to DOT-CFR Title 49 parts 171-189.

Marine transport: Classified as non-hazardous material as per IMDG amendment 27.

Air transport: Complies with IATA/ICAO, Special provision A67.

## Applications

Ultra high rate range batteries incorporate EverExceed advanced VRLA technology designed for long life and ultra high performance in:

- Uninterruptible Power Supply (UPS)
- Switchgear
- Emergency lighting
- Overhead cranes
- Telecom
- Alarm and security
- Industrial DC power

## Compliant Standards

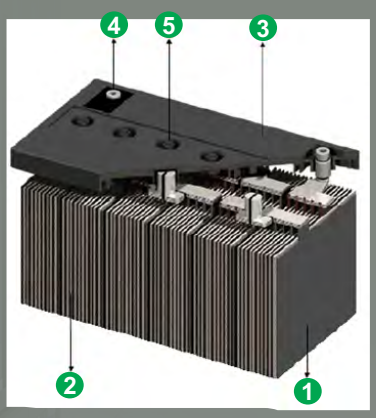
- IEC 60896-21/22-2004
- IEC 61427-2005
- DIN 43539-T5
- BS 6290 PART 4
- NEBS Compliant
- EUROBAT, TR-NWT-000766

# Construction

AGM battery construction is as shown in the diagram below. The positive and negative grids are cast from a calcium / tin lead alloy to reduce grid growth and corrosion. The active material is manufactured from best high purity lead (99.994%) to minimize the negative effects of impurities.
Separator is mat of random woven acid resistant glass fibers, which acts as sponge - soaking up and immobilizing the electrolyte whilst maintaining good acid to plate contact and availability during discharge. "U wrapping" is employed to eliminate the risk of short circuits due to mossing and debris at the bottom of the cell.
The purpose of the separator is to maintain a constant distance between the positive and negative plates, thus removing the pos-sibility of short circuits whilst allowing the active material to fully react with the electrolyte. The random weaving also results in an open structure, which offers minimal resistance to the flow of electrolyte during filling.

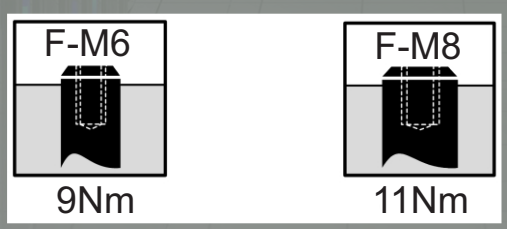
**Electrolyte filling:** Special production and stringent QC systems are utilized to ensure the electrolyte saturation is optimized for each cell.
Measured high vacuum acid fill, reduces electrical variability between cells. The battery design and construction negates the need for electrolyte addition and the battery remains maintenance free throughout its design life.

**Safety release valve:** The battery will operate above atmospheric pressure under normal operating conditions, however the maximum pressure is governed by the safety one-way release valve. Open is activated by pressures in excess of ap-prox. 2 psi (14 Kpa), resealing at approx. 1.2 psi (8.4Kpa).




1. Plates: Low calcium / high tin lead alloy, optimized for high corrosion re-sistance.
2. Separator: Highly porous glass micro-fibre separator, optimized for low internal resistance, for maximum Absorption of the electrolyte and for electrical separation of the positive and negative plates.
3. Standard Housing: Reinforced ABS (UL 94HB) container and cover; Optional Housing: Flame-retardant reinforced ABS container and cover compliant with U.L.94 V-0 with an Oxygen limiting Index of greater than 28%.
4. Terminals: Silver plated copper female insert for easy and safe assembly and maintenance free connection with Excellent conductivity.
5. Valves: Release gas in case of excess pressure and protects the cell against atmosphere.

# Terminal and torque




# Electrical Specifications & Dimensions

| UL Model | Model | Nom. Voltage (V) | 15 min. WPC to 1.67VPC | Short Circuit Amps | Internal Resistance (mΩ) | Terminal Type | Battery Weight (kg/lbs) | | Outline Dimensions (mm/inch) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Length | Width | Height |
| UHR-124 | UHR 12-21W | 12 | 21 | 250 | 45 | Faston Tab No. 187 | 1.60 | 3.52 | 90/3.55 | 70/2.76 | 102/4.02 |
| UHR-127 | UHR 12-24W | 12 | 24 | 260 | 28 | Faston Tab No. 187 | 1.80 | 3.96 | 90/3.55 | 70/2.76 | 102/4.02 |
| UHR-127 | UHR 12-24W-1 | 12 | 24 | 260 | 28 | Faston Tab No. 250 | 2.10 | 4.62 | 151/5.95 | 65/2.56 | 94/3.70 |
| UHR-129 | UHR 12-34W | 12 | 34 | 350 | 20 | Faston Tab No. 250 | 2.55 | 5.61 | 151/5.95 | 65/2.56 | 94/3.70 |
| UHR-129.0 | UHR 12-36W | 12 | 36 | 355 | 18 | Faston Tab No. 250 | 2.47 | 4.53 | 151/5.95 | 65/2.56 | 94/3.70 |
| UHR-1212 | UHR 12-55W | 12 | 55 | 480 | 13.4 | Faston Tab No. 250 | 3.90 | 8.58 | 151/5.95 | 98/3.86 | 94/3.70 |
| UHR-1222 | UHR 12-88W | 12 | 88 | 830 | 10 | F-M5 | 6.00 | 13.2 | 181/7.13 | 76/2.99 | 167/6.58 |
| UHR-1226 | UHR 12-90W | 12 | 90 | 1315 | 9.8 | F-M5 | 8.40 | 18.5 | 165/6.49 | 125.5/4.94 | 175/6.88 |
| UHR-1228 | UHR 12-98W | 12 | 98 | 1550 | 9.5 | F-M5 | 8.50 | 18.7 | 176/6.90 | 166/6.54 | 126/4.96 |
| UHR-1235 | UHR 12-140W | 12 | 140 | 2140 | 7.6 | F-M6 | 10.8 | 23.8 | 195/7.68 | 130/5.12 | 154/6.06 |
| UHR-1255 | UHR 12-200W | 12 | 200 | 2410 | 7.2 | F-M6 | 16.5 | 36.3 | 230/9.05 | 137/5.39 | 210/8.27 |
| UHR-1290 | UHR 12-290W | 12 | 290 | 3300 | 5.5 | F-M6 | 24.0 | 52.8 | 259/10.2 | 168/6.62 | 215/8.5 |
| UHR-12100 | UHR 12-350W | 12 | 350 | 3550 | 5.0 | F-M6 | 25.0 | 55.0 | 259/10.2 | 168/6.62 | 215/8.5 |
| UHR-12110 | UHR 12-420W | 12 | 420 | 4200 | 4.3 | F-M8 | 31.5 | 69.3 | 332/13.1 | 174/6.86 | 225/8.8 |
| UHR-12120 | UHR 12-460W | 12 | 460 | 4550 | 3.5 | F-M8 | 33.0 | 72.6 | 332/13.1 | 174/6.86 | 225/8.8 |
| UHR-12130 | UHR 12-480W | 12 | 480 | 4600 | 3.4 | F-M8 | 35.5 | 78.1 | 408/16.0 | 175/6.89 | 230/9.06 |
| UHR-12140 | UHR 12-520W | 12 | 520 | 4800 | 3.3 | F-M8 | 38.0 | 83.6 | 408/16.0 | 175/6.89 | 230/9.06 |
| UHR-12150 | UHR 12-540W | 12 | 540 | 5000 | 3.2 | F-M8 | 40.0 | 88.0 | 340/13.4 | 173/6.81 | 288/11.3 |
| UHR-12165 | UHR 12-580W | 12 | 580 | 5400 | 3.1 | F-M8 | 43.5 | 95.7 | 480/18.9 | 170/6.69 | 240/9.45 |
| UHR-12180 | UHR 12-635W | 12 | 635 | 5500 | 3.0 | F-M8 | 51.5 | 113 | 530/20.8 | 210/8.26 | 220/8.66 |
| UHR-12200 | UHR 12-700W | 12 | 700 | 6000 | 2.8 | F-M8 | 54.5 | 120 | 530/20.8 | 210/8.26 | 220/8.66 |
| UHR-12220 | UHR 12-760W | 12 | 760 | 6150 | 2.7 | F-M8 | 65.0 | 143 | 520/20.5 | 238/9.37 | 220/8.66 |
| UHR-12230 | UHR 12-820W | 12 | 820 | 6300 | 2.6 | F-M8 | 68.0 | 150 | 520/20.5 | 238/9.37 | 220/8.66 |
| UHR-12250 | UHR 12-880W | 12 | 880 | 6600 | 2.5 | F-M8 | 70.0 | 154 | 520/20.5 | 238/9.37 | 220/8.66 |

# Ultra High Rate Range battery Discharge Amperes Data @ 25°C

| Battery Model | End VPC | Discharge Watts Per Cell (WPC) Data | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 5min | 10min | 15min | 20min | 25min | 30min | 60min | 90min |
| UHR 12-21W | 1.85 | 22.2 | 21.9 | 17.4 | 14.7 | 12.1 | 10.2 | 5.11 | 4.00 |
| | 1.8 | 25.3 | 24.4 | 19.1 | 15.9 | 13.2 | 10.7 | 5.38 | 4.19 |
| | 1.75 | 28.3 | 25.6 | 20.3 | 17.1 | 13.9 | 11.6 | 5.78 | 4.45 |
| | 1.7 | 32.5 | 25.8 | 20.4 | 17.2 | 14.1 | 12.2 | 6.11 | 4.71 |
| | 1.67 | 33.1 | 26.1 | 21.0 | 17.5 | 14.5 | 12.6 | 6.27 | 4.90 |
| | 1.6 | 34.8 | 26.4 | 21.1 | 17.9 | 14.9 | 13.2 | 6.54 | 5.04 |
| UHR 12-24W | 1.85 | 25.4 | 25.1 | 19.9 | 16.8 | 13.8 | 11.6 | 5.84 | 4.57 |
| | 1.8 | 28.9 | 27.9 | 21.8 | 18.2 | 15.1 | 12.3 | 6.15 | 4.79 |
| | 1.75 | 32.3 | 29.3 | 23.2 | 19.5 | 15.9 | 13.2 | 6.61 | 5.09 |
| | 1.7 | 37.2 | 29.5 | 23.3 | 19.7 | 16.2 | 13.9 | 6.98 | 5.39 |
| | 1.67 | 37.9 | 29.9 | 24.0 | 20.0 | 16.5 | 14.4 | 7.17 | 5.61 |
| | 1.6 | 39.7 | 30.2 | 24.2 | 20.4 | 17.0 | 15.0 | 7.47 | 5.76 |
| UHR 12-34W | 1.85 | 35.9 | 35.5 | 28.2 | 23.7 | 19.6 | 16.4 | 8.27 | 6.48 |
| | 1.8 | 40.9 | 39.5 | 30.9 | 25.8 | 21.4 | 17.4 | 8.72 | 6.79 |
| | 1.75 | 45.8 | 41.5 | 32.9 | 27.7 | 22.5 | 18.8 | 9.36 | 7.21 |
| | 1.7 | 52.7 | 41.8 | 33.0 | 27.9 | 22.9 | 19.7 | 9.89 | 7.63 |
| | 1.67 | 53.6 | 42.3 | 34.0 | 28.3 | 23.4 | 20.4 | 10.2 | 7.94 |
| | 1.6 | 56.3 | 42.7 | 34.2 | 28.9 | 24.1 | 21.3 | 10.6 | 8.15 |
| UHR 12-36W | 1.85 | 38.1 | 37.6 | 29.9 | 25.1 | 20.8 | 17.4 | 8.76 | 6.86 |
| | 1.8 | 43.3 | 41.9 | 32.7 | 27.3 | 22.7 | 18.4 | 9.23 | 7.18 |
| | 1.75 | 48.5 | 43.9 | 34.8 | 29.3 | 23.8 | 19.9 | 9.91 | 7.63 |
| | 1.7 | 55.8 | 44.2 | 35.0 | 29.5 | 24.2 | 20.9 | 10.5 | 8.08 |
| | 1.67 | 56.8 | 44.8 | 36.0 | 30.0 | 24.8 | 21.6 | 10.8 | 8.41 |
| | 1.6 | 59.6 | 45.2 | 36.2 | 30.6 | 25.5 | 22.6 | 11.2 | 8.63 |
| UHR 12-55W | 1.85 | 58.1 | 57.5 | 45.6 | 38.4 | 31.7 | 26.6 | 13.4 | 10.5 |
| | 1.8 | 66.2 | 64.0 | 49.9 | 41.7 | 34.6 | 28.1 | 14.1 | 11.0 |
| | 1.75 | 74.1 | 67.1 | 53.2 | 44.8 | 36.4 | 30.4 | 15.1 | 11.7 |
| | 1.7 | 85.2 | 67.6 | 53.5 | 45.1 | 37.0 | 31.9 | 16.0 | 12.3 |
| | 1.67 | 86.8 | 68.4 | 55.0 | 45.8 | 37.9 | 32.9 | 16.4 | 12.8 |
| | 1.6 | 91.1 | 69.1 | 55.3 | 46.8 | 38.9 | 34.5 | 17.1 | 13.2 |
| UHR 12-88W | 1.85 | 93.0 | 91.9 | 73.0 | 61.5 | 50.8 | 42.5 | 21.4 | 16.8 |
| | 1.8 | 106 | 102 | 79.9 | 66.7 | 55.4 | 45.0 | 22.6 | 17.6 |
| | 1.75 | 119 | 107 | 85.1 | 71.6 | 58.2 | 48.6 | 24.2 | 18.7 |
| | 1.7 | 136 | 108 | 85.5 | 72.2 | 59.3 | 51.0 | 25.6 | 19.8 |
| | 1.67 | 139 | 109 | 88.0 | 73.3 | 60.6 | 52.7 | 26.3 | 20.6 |
| | 1.6 | 146 | 111 | 88.6 | 74.9 | 62.3 | 55.2 | 27.4 | 21.1 |
| UHR 12-90W | 1.85 | 95.1 | 94.0 | 74.7 | 62.9 | 51.9 | 43.5 | 21.9 | 17.1 |
| | 1.8 | 108 | 105 | 81.7 | 68.2 | 56.7 | 46.0 | 23.1 | 18.0 |
| | 1.75 | 121 | 110 | 87.0 | 73.2 | 59.5 | 49.7 | 24.8 | 19.1 |
| | 1.7 | 139 | 111 | 87.5 | 73.8 | 60.6 | 52.2 | 26.2 | 20.2 |
| | 1.67 | 142 | 112 | 90.0 | 74.9 | 62.0 | 53.9 | 26.9 | 21.0 |
| | 1.6 | 149 | 113 | 90.6 | 76.6 | 63.7 | 56.4 | 28.0 | 21.6 |
| UHR 12-98W | 1.85 | 104 | 102 | 81.3 | 68.5 | 56.5 | 47.4 | 23.8 | 18.7 |
| | 1.8 | 118 | 114 | 88.9 | 74.3 | 61.7 | 50.1 | 25.1 | 19.6 |
| | 1.75 | 132 | 119 | 94.7 | 79.8 | 64.8 | 54.1 | 27.0 | 20.8 |
| | 1.7 | 152 | 120 | 95.2 | 80.4 | 66.0 | 56.8 | 28.5 | 22.0 |
| | 1.67 | 155 | 122 | 98.0 | 81.6 | 67.5 | 58.7 | 29.3 | 22.9 |
| | 1.6 | 162 | 123 | 98.6 | 83.4 | 69.4 | 61.4 | 30.5 | 23.5 |

# Ultra High Rate Range battery Discharge Amperes Data @ 25°C

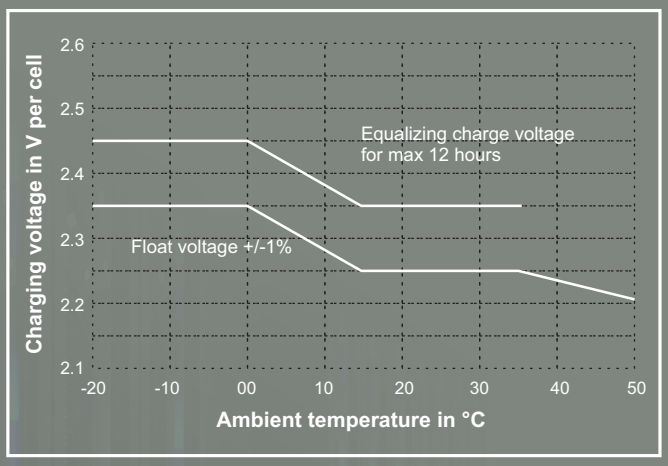
| Battery Model | End VPC | Discharge Watts Per Cell (WPC) Data | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 5min | 10min | 15min | 20min | 25min | 30min | 60min | 90min |
| UHR 12-140W | 1.85 | 148 | 146 | 116 | 97.8 | 80.8 | 67.7 | 34.1 | 26.7 |
| | 1.8 | 169 | 163 | 127 | 106 | 88.2 | 71.6 | 35.9 | 27.9 |
| | 1.75 | 189 | 171 | 135 | 114 | 92.6 | 77.3 | 38.5 | 29.7 |
| | 1.7 | 217 | 172 | 136 | 115 | 94.3 | 81.2 | 40.7 | 31.4 |
| | 1.67 | 221 | 174 | 140 | 117 | 96.5 | 83.8 | 41.8 | 32.7 |
| | 1.6 | 232 | 176 | 141 | 119 | 99.1 | 87.7 | 43.6 | 33.6 |
| UHR 12-200W | 1.85 | 211 | 209 | 166 | 140 | 115 | 96.7 | 48.6 | 38.1 |
| | 1.8 | 241 | 233 | 181 | 152 | 126 | 102 | 51.3 | 39.9 |
| | 1.75 | 269 | 244 | 193 | 163 | 132 | 110 | 55.1 | 42.4 |
| | 1.7 | 310 | 246 | 194 | 164 | 135 | 116 | 58.2 | 44.9 |
| | 1.67 | 316 | 249 | 200 | 167 | 138 | 120 | 59.7 | 46.7 |
| | 1.6 | 331 | 251 | 201 | 170 | 142 | 125 | 62.2 | 48.0 |
| UHR 12-290W | 1.85 | 307 | 303 | 241 | 203 | 167 | 140 | 70.5 | 55.3 |
| | 1.8 | 349 | 337 | 263 | 220 | 183 | 148 | 74.3 | 57.9 |
| | 1.75 | 391 | 354 | 280 | 236 | 192 | 160 | 79.9 | 61.5 |
| | 1.7 | 449 | 356 | 282 | 238 | 195 | 168 | 84.4 | 65.1 |
| | 1.67 | 458 | 361 | 290 | 241 | 200 | 174 | 86.6 | 67.7 |
| | 1.6 | 480 | 364 | 292 | 247 | 205 | 182 | 90.3 | 69.5 |
| UHR 12-350W | 1.85 | 370 | 366 | 290 | 244 | 202 | 169 | 85.1 | 66.7 |
| | 1.8 | 421 | 407 | 318 | 265 | 220 | 179 | 89.7 | 69.9 |
| | 1.75 | 471 | 427 | 338 | 285 | 231 | 193 | 96.4 | 74.2 |
| | 1.7 | 542 | 430 | 340 | 287 | 236 | 203 | 102 | 78.6 |
| | 1.67 | 552 | 435 | 350 | 291 | 241 | 210 | 105 | 81.7 |
| | 1.6 | 580 | 440 | 352 | 298 | 248 | 219 | 109 | 83.9 |
| UHR 12-420W | 1.85 | 444 | 439 | 348 | 293 | 242 | 203 | 102 | 80.0 |
| | 1.8 | 506 | 489 | 381 | 318 | 265 | 215 | 108 | 83.8 |
| | 1.75 | 566 | 512 | 406 | 342 | 278 | 232 | 116 | 89.1 |
| | 1.7 | 651 | 516 | 408 | 344 | 283 | 244 | 122 | 94.3 |
| | 1.67 | 663 | 523 | 420 | 350 | 289 | 251 | 125 | 98.1 |
| | 1.6 | 695 | 528 | 423 | 358 | 297 | 263 | 131 | 100 |
| UHR 12-460W | 1.85 | 486 | 481 | 382 | 321 | 265 | 222 | 112 | 87.6 |
| | 1.8 | 554 | 535 | 417 | 349 | 290 | 235 | 118 | 91.8 |
| | 1.75 | 620 | 561 | 445 | 374 | 304 | 254 | 127 | 97.5 |
| | 1.7 | 713 | 565 | 447 | 377 | 310 | 267 | 134 | 103 |
| | 1.67 | 726 | 572 | 460 | 383 | 317 | 275 | 137 | 107 |
| | 1.6 | 762 | 578 | 463 | 392 | 326 | 288 | 143 | 110 |
| UHR 12-480W | 1.85 | 507 | 501 | 398 | 335 | 277 | 232 | 117 | 91.5 |
| | 1.8 | 578 | 558 | 436 | 364 | 302 | 245 | 123 | 95.8 |
| | 1.75 | 647 | 585 | 464 | 391 | 317 | 265 | 132 | 102 |
| | 1.7 | 744 | 590 | 467 | 394 | 323 | 278 | 140 | 108 |
| | 1.67 | 757 | 597 | 480 | 400 | 331 | 287 | 143 | 112 |
| | 1.6 | 795 | 603 | 483 | 409 | 340 | 301 | 149 | 115 |
| UHR 12-520W | 1.85 | 550 | 543 | 431 | 363 | 300 | 251 | 126 | 99.1 |
| | 1.8 | 626 | 605 | 472 | 394 | 328 | 266 | 133 | 104 |
| | 1.75 | 701 | 634 | 503 | 423 | 344 | 287 | 143 | 110 |
| | 1.7 | 806 | 639 | 505 | 426 | 350 | 302 | 151 | 117 |
| | 1.67 | 820 | 647 | 520 | 433 | 358 | 311 | 155 | 121 |
| | 1.6 | 861 | 653 | 523 | 443 | 368 | 326 | 162 | 125 |

# Ultra High Rate Range battery Discharge Amperes Data @ 25°C

| Battery Model | End VPC | Discharge Watts Per Cell (WPC) Data | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 5min | 10min | 15min | 20min | 25min | 30min | 60min | 90min |
| UHR 12-540W | 1.85 | 571 | 564 | 448 | 377 | 312 | 261 | 131 | 103 |
| | 1.8 | 650 | 628 | 490 | 409 | 340 | 276 | 138 | 108 |
| | 1.75 | 727 | 658 | 522 | 439 | 357 | 298 | 149 | 115 |
| | 1.7 | 837 | 663 | 525 | 443 | 364 | 313 | 157 | 121 |
| | 1.67 | 852 | 672 | 540 | 450 | 372 | 323 | 161 | 126 |
| | 1.6 | 894 | 679 | 543 | 460 | 382 | 338 | 168 | 129 |
| UHR 12-580W | 1.85 | 613 | 606 | 481 | 405 | 335 | 280 | 141 | 111 |
| | 1.8 | 698 | 675 | 526 | 439 | 365 | 297 | 149 | 116 |
| | 1.75 | 781 | 707 | 561 | 472 | 383 | 320 | 160 | 123 |
| | 1.7 | 899 | 713 | 564 | 476 | 391 | 336 | 169 | 130 |
| | 1.67 | 915 | 722 | 580 | 483 | 400 | 347 | 173 | 135 |
| | 1.6 | 960 | 729 | 584 | 494 | 411 | 364 | 181 | 139 |
| UHR 12-635W | 1.85 | 671 | 663 | 527 | 444 | 366 | 307 | 154 | 121 |
| | 1.8 | 764 | 739 | 576 | 481 | 400 | 325 | 163 | 127 |
| | 1.75 | 855 | 774 | 614 | 517 | 420 | 350 | 175 | 135 |
| | 1.7 | 984 | 780 | 617 | 521 | 428 | 368 | 185 | 143 |
| | 1.67 | 1002 | 790 | 635 | 529 | 438 | 380 | 190 | 148 |
| | 1.6 | 1051 | 798 | 639 | 541 | 449 | 398 | 198 | 152 |
| UHR 12-700W | 1.85 | 740 | 731 | 581 | 489 | 404 | 338 | 170 | 133 |
| | 1.8 | 843 | 814 | 635 | 530 | 441 | 358 | 179 | 140 |
| | 1.75 | 943 | 853 | 677 | 570 | 463 | 386 | 193 | 148 |
| | 1.7 | 1085 | 860 | 680 | 574 | 471 | 406 | 204 | 157 |
| | 1.67 | 1105 | 871 | 700 | 583 | 482 | 419 | 209 | 163 |
| | 1.6 | 1159 | 880 | 704 | 596 | 496 | 439 | 218 | 168 |
| UHR 12-760W | 1.85 | 803 | 794 | 630 | 531 | 438 | 367 | 185 | 145 |
| | 1.8 | 915 | 884 | 690 | 576 | 479 | 389 | 195 | 152 |
| | 1.75 | 1024 | 927 | 735 | 619 | 502 | 419 | 209 | 161 |
| | 1.7 | 1178 | 934 | 739 | 623 | 512 | 441 | 221 | 171 |
| | 1.67 | 1199 | 946 | 760 | 633 | 524 | 455 | 227 | 178 |
| | 1.6 | 1258 | 955 | 765 | 647 | 538 | 476 | 237 | 182 |
| UHR 12-820W | 1.85 | 867 | 857 | 680 | 573 | 473 | 396 | 199 | 156 |
| | 1.8 | 987 | 954 | 744 | 621 | 517 | 419 | 210 | 164 |
| | 1.75 | 1105 | 1000 | 793 | 667 | 542 | 453 | 226 | 174 |
| | 1.7 | 1271 | 1007 | 797 | 672 | 552 | 476 | 239 | 184 |
| | 1.67 | 1294 | 1020 | 820 | 683 | 565 | 491 | 245 | 192 |
| | 1.6 | 1358 | 1030 | 825 | 698 | 580 | 514 | 255 | 197 |
| UHR 12-880W | 1.85 | 930 | 919 | 730 | 615 | 508 | 425 | 214 | 168 |
| | 1.8 | 1059 | 1024 | 799 | 667 | 554 | 450 | 226 | 176 |
| | 1.75 | 1185 | 1073 | 851 | 716 | 582 | 486 | 242 | 187 |
| | 1.7 | 1364 | 1081 | 855 | 722 | 593 | 510 | 256 | 198 |
| | 1.67 | 1389 | 1095 | 880 | 733 | 606 | 527 | 263 | 206 |
| | 1.6 | 1457 | 1106 | 886 | 749 | 623 | 552 | 274 | 211 |

# Characteristic Curves for Ultra High Rate Range battery

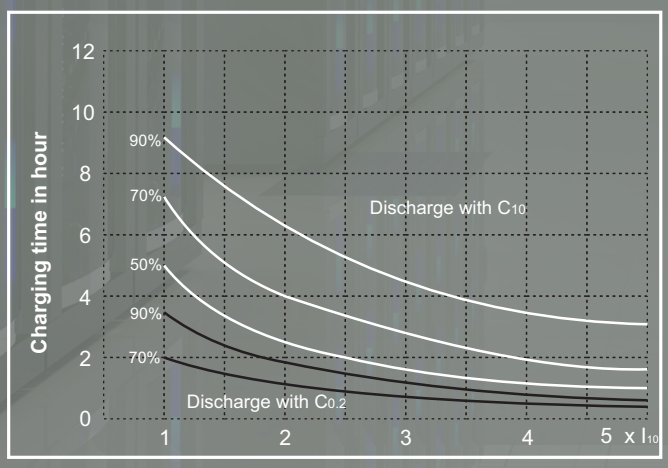
## Float Voltage & Charging




**Constant Voltage charging is recommended**

**Recommended float voltage:**
2.25VPC @ 25ºC(77ºF)
**Float Voltage Range:**
2.23VPC to 2.27VPC@ 25ºC(77ºF)
**Equalize voltage:**
2.35VPC for 12 Hours
**Temperature compensation:**
-3mv/cell/°C

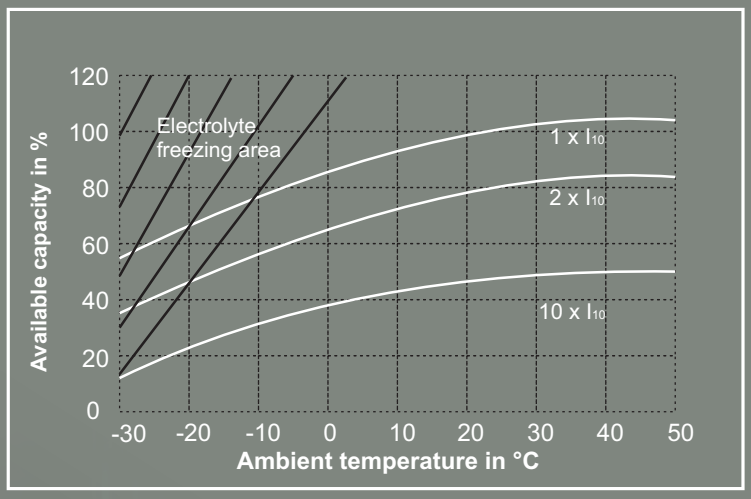
For charging 2.23 V/cell is recommended. The charging voltage must be compensated according to the curve for continuously different battery ambient temperature.



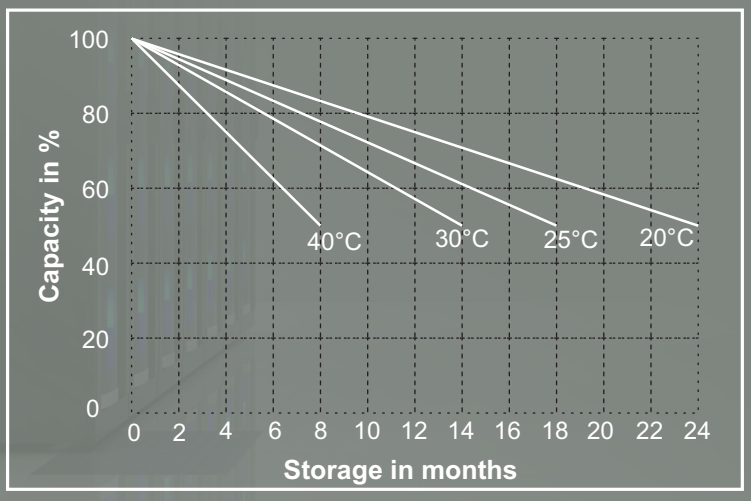

**Temperature compensation:**
Apply for temperature range of 0ºC / 32ºF to 40ºC/ 104ºF. Subtract 3 mV / ºC / cell or 1.7 mV / ºF / cell, above 25ºC / 77ºF. Add 3mV / ºC / cell or 1.7 mV / ºF / cell, below 25ºC / 77ºF.

Recharging time in dependence of charging current (guide values) for up to 50, 70 and 90% of capacity at 25°C and with a charging voltage of 2.27 V/cell.

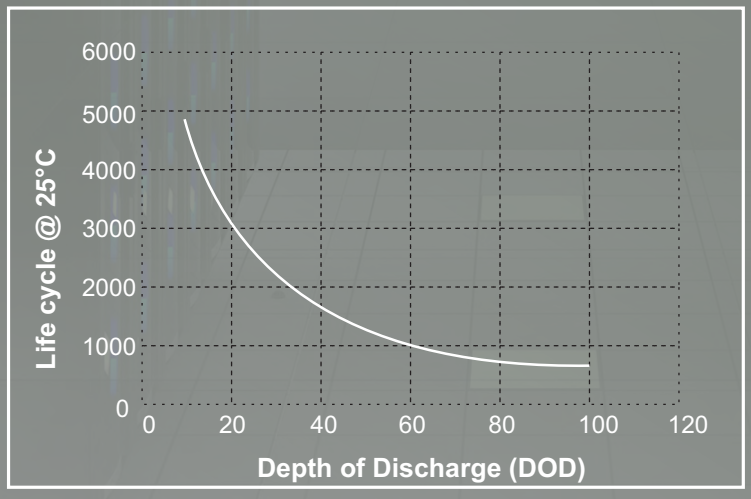
# Characteristic Curves for Ultra High Rate Range battery




Extracted capacity in relation to the temperature.




Self-discharge in relation to the storage temperature.




Life cycle in relation to the depth of discharge @25°C.

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