



**HRL series**

**HRL 1280W 12V 80W**



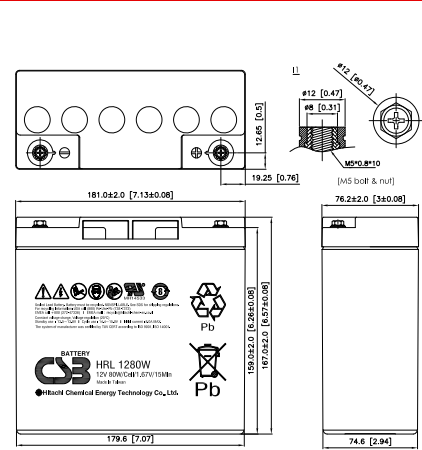
**Valve Regulated Lead Acid Battery**

Maintenance-Free Sealed Lead Acid Battery.  
Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99%.

**Design for Standby Power Applications**

|  |   |
|--|---|
| <p><b>【Design Life】</b><br/>Up to 8 Years in Standby Service at 25°C<br/>Eurobat (20°C) : 6-9 years, General Purpose</p> <p><b>【Operating Temperature Range】</b><br/>Nominal Operating Temperature : 25°C (77°F)<br/>Discharge : -15°C ~ 50°C (5°F~122°F)<br/>Charge: -15°C ~ 40°C (5°F~104°F)<br/>Storage: -15°C ~ 40°C (5°F~104°F)</p> | <p><b>【Float Charging Voltage】</b><br/>13.5 ~ 13.8 VDC/Unit at 25°C (77°F)</p> <p><b>【Equalization Charging Voltage】</b><br/>14.4 ~ 15.0 VDC/Unit at 25°C (77°F)</p> <p><b>【Self Discharge】</b><br/>Less than 10% after 90 days, can be stored up to 6 months at 25°C (77°F);<br/>Fully recharging is required before usage, and charged sooner if stored at higher temperature than 25°C (77°F).</p> |
|--|---|

| Specification             |   | Design according with IEC 61056-1/2:2012 |                |
|---------------------------|---|--|----------------|
| Nominal Voltage           | 12V (6 cells per unit)  |  |                |
| Nominal Capacity          | 80W @15min-rate to 1.67V per cell @25°C (77°F)                  |  |                |
| Weight                    | Approx. 6.80 Kg (14.99 lbs)                                     |  |                |
| Maximum Discharge Current | 300A (5sec)   |  |                |
| Internal Resistance       | Approx. 9.40 mΩ   |  |                |
| Short Circuit Current     | 776A  |  |                |
| Maximum Charge Current    | 8.0A  |  |                |
| Terminal types            | I1 thread lead alloy terminal to accept M5 bolt                 |  |                |
| Terminal hardware Torque  | 59.0 Kgf-cm / 51.0 lbf-in / 5.73 N-m                            |  |                |
| Container Material        | ABS (UL 94-HB) & Flame Retardant (94-V0) available upon request |  |                |
| Dimensions                | Length (L)  | 181.0±2.0 mm                             | 7.13±0.08 inch |
|                           | Width (W)   | 76.2±1.0 mm                              | 3.00±0.04 inch |
|                           | Container Height (h)  | 167.0±2.0 mm                             | 6.57±0.08 inch |
|                           | Overall Height (H)  | 167.0±2.0 mm                             | 6.57±0.08 inch |



| Constant Current Discharge Characteristics Unit: A (25°C, 77°F) |      |      |      |      |      |       |       |       |       |       |       |       |
|---|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| F.V/Time  | 2MIN | 4MIN | 5MIN | 6MIN | 8MIN | 10MIN | 15MIN | 20MIN | 30MIN | 45MIN | 60MIN | 90MIN |
| 1.60V   | 165  | 113  | 98.4 | 87.9 | 72.3 | 62.4  | 44.4  | 35.0  | 24.9  | 18.2  | 14.6  | 10.6  |
| 1.67V   | 142  | 103  | 90.7 | 81.7 | 69.5 | 58.7  | 43.5  | 34.0  | 24.6  | 18.0  | 14.4  | 10.4  |
| 1.70V   | 133  | 98.6 | 88.3 | 80.7 | 67.8 | 58.1  | 42.4  | 33.7  | 24.3  | 17.7  | 14.2  | 10.2  |
| 1.75V   | 119  | 92.3 | 82.6 | 75.5 | 64.3 | 54.3  | 41.6  | 32.9  | 23.7  | 17.4  | 14.0  | 10.1  |
| 1.80V   | 105  | 83.2 | 75.7 | 70.0 | 60.8 | 51.8  | 39.8  | 32.1  | 23.0  | 16.9  | 13.6  | 10.0  |
| 1.85V   | 92.3 | 76.6 | 70.1 | 65.2 | 56.8 | 49.2  | 37.6  | 30.1  | 22.1  | 16.6  | 13.50 | 9.84  |

| Constant Power Discharge Characteristics Unit: W (25°C, 77°F) |      |      |      |      |      |       |       |       |       |       |       |       |
|---|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| F.V/Time  | 2MIN | 4MIN | 5MIN | 6MIN | 8MIN | 10MIN | 15MIN | 20MIN | 30MIN | 45MIN | 60MIN | 90MIN |
| 1.60V   | 1584 | 1171 | 1047 | 955  | 790  | 691   | 496   | 391   | 282   | 209   | 169   | 122   |
| 1.67V   | 1431 | 1073 | 971  | 895  | 761  | 661   | 485   | 382   | 280   | 207   | 167   | 121   |
| 1.70V   | 1369 | 1045 | 953  | 884  | 743  | 660   | 475   | 381   | 275   | 204   | 165   | 118   |
| 1.75V   | 1270 | 983  | 897  | 832  | 708  | 626   | 468   | 370   | 270   | 200   | 161   | 117   |
| 1.80V   | 1173 | 909  | 836  | 781  | 679  | 593   | 453   | 364   | 266   | 197   | 159   | 116   |
| 1.85V   | 1091 | 855  | 786  | 734  | 641  | 561   | 426   | 346   | 257   | 192   | 156   | 115   |

Please refer to the official site for the latest rating confirmation. URL: [www.csb-battery.com](http://www.csb-battery.com) Issued: 170201

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