Specifications

**Rated Voltage**
12V

**Nominal Capacity**
- C20, 1.80V/cell: 190Ah
- C50, 1.75V/cell: 190Ah

**Dimension**
- Length: 559±3mm (22.01 inches)
- Width: 125±2mm (4.92 inches)
- Container Height: 320±3mm (12.6 inches)
- Total Height: 320±3mm (12.6 inches)

**Approx. Weight**
57.6 Kg (127.0 lbs)

**Terminal**
M6

**Container Material**
PC-ABS flame retardant jar and cover to UL94 V-0

**Rated Capacity (25°C)**
- 199.6 Ah (20hr, 9.98A, 1.80V/cell)
- 190.0 Ah (10hr, 19.0A, 1.80V/cell)
- 173.0 Ah (5hr, 34.6A, 1.75V/cell)
- 166.8 Ah (3hr, 55.6A, 1.75V/cell)
- 138.9 Ah (1hr, 138.9A, 1.67V/cell)

**Max. Discharge Current**
2280A

**Internal Resistance (25°C)**
Approx. 3.0mΩ (Fully charged)

**Operating Temp.Range**
- Discharge: -40 to 65°C (-40 to 149°F)
- Charge: 0 to 40°C (32 to 104°F)
- Storage: -20 to 40°C (-4 to 104°F)

**Nominal Operating Temp. Range**
25±3°C (77±5°F)

**Max. Charging Current(25°C)**
57.0A

**Charge voltage(25°C)**
- Equalization: 14.1±1.4V
- Temp. Coefficient: -3mV/cell°C

**Effect of temp. to Capacity**
- 40°C (104°F): 103%
- 25°C (77°F): 100%
- 0°C (32°F): 86%

**Self Discharge**
PLH series batteries can be stored up to 24 months at 25°C (77°F). For higher temperatures the time interval will be shorter. Battery needs to be given a freshening charge when the OCV approach 2.10V/cell or when the maximum storage time is reached, whichever occurs first.

**Constant Current Discharge (Amperes) at 25°C (77°F)**

<table>
<thead>
<tr>
<th>F.V./Time</th>
<th>10 min</th>
<th>15 min</th>
<th>20 min</th>
<th>30 min</th>
<th>45 min</th>
<th>1h</th>
<th>2h</th>
<th>3h</th>
<th>4h</th>
<th>5h</th>
<th>8h</th>
<th>10h</th>
<th>20h</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.85V/cell</td>
<td>341.5</td>
<td>292.9</td>
<td>249.5</td>
<td>219.0</td>
<td>195.0</td>
<td>183.1</td>
<td>133.1</td>
<td>125.7</td>
<td>118.8</td>
<td>112.6</td>
<td>107.4</td>
<td>96.4</td>
<td></td>
</tr>
<tr>
<td>1.80V/cell</td>
<td>377.8</td>
<td>321.9</td>
<td>267.1</td>
<td>210.0</td>
<td>158.3</td>
<td>128.7</td>
<td>76.2</td>
<td>54.6</td>
<td>42.1</td>
<td>34.0</td>
<td>23.4</td>
<td>19.0</td>
<td>9.98</td>
</tr>
<tr>
<td>1.75V/cell</td>
<td>408.5</td>
<td>343.7</td>
<td>282.3</td>
<td>218.8</td>
<td>162.5</td>
<td>133.7</td>
<td>77.8</td>
<td>55.6</td>
<td>43.1</td>
<td>34.6</td>
<td>23.8</td>
<td>19.2</td>
<td>10.1</td>
</tr>
<tr>
<td>1.70V/cell</td>
<td>434.6</td>
<td>359.7</td>
<td>295.2</td>
<td>226.0</td>
<td>167.3</td>
<td>136.8</td>
<td>78.9</td>
<td>56.3</td>
<td>43.5</td>
<td>35.0</td>
<td>23.9</td>
<td>19.4</td>
<td>10.1</td>
</tr>
<tr>
<td>1.67V/cell</td>
<td>456.3</td>
<td>372.5</td>
<td>301.7</td>
<td>231.0</td>
<td>170.3</td>
<td>138.9</td>
<td>79.5</td>
<td>57.1</td>
<td>43.7</td>
<td>35.2</td>
<td>24.0</td>
<td>19.5</td>
<td>10.2</td>
</tr>
<tr>
<td>1.60V/cell</td>
<td>482.0</td>
<td>391.2</td>
<td>311.9</td>
<td>236.2</td>
<td>174.7</td>
<td>140.2</td>
<td>80.2</td>
<td>58.0</td>
<td>44.1</td>
<td>35.4</td>
<td>24.1</td>
<td>19.7</td>
<td>10.3</td>
</tr>
</tbody>
</table>

**Constant Power Discharge (Watts/cell) at 25°C (77°F)**

<table>
<thead>
<tr>
<th>F.V./Time</th>
<th>10 min</th>
<th>15 min</th>
<th>20 min</th>
<th>30 min</th>
<th>45 min</th>
<th>1h</th>
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<th>3h</th>
<th>4h</th>
<th>5h</th>
<th>8h</th>
<th>10h</th>
<th>20h</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.85V/cell</td>
<td>647.5</td>
<td>560.5</td>
<td>480.0</td>
<td>379.7</td>
<td>295.6</td>
<td>243.6</td>
<td>145.7</td>
<td>105.5</td>
<td>82.4</td>
<td>66.5</td>
<td>46.5</td>
<td>37.5</td>
<td>19.7</td>
</tr>
<tr>
<td>1.80V/cell</td>
<td>705.2</td>
<td>607.9</td>
<td>509.1</td>
<td>406.1</td>
<td>311.0</td>
<td>253.5</td>
<td>151.2</td>
<td>108.9</td>
<td>84.2</td>
<td>68.6</td>
<td>47.3</td>
<td>38.6</td>
<td>20.3</td>
</tr>
<tr>
<td>1.75V/cell</td>
<td>755.0</td>
<td>642.7</td>
<td>533.5</td>
<td>419.9</td>
<td>316.9</td>
<td>261.8</td>
<td>153.7</td>
<td>110.9</td>
<td>86.0</td>
<td>69.2</td>
<td>47.9</td>
<td>38.8</td>
<td>20.5</td>
</tr>
<tr>
<td>1.70V/cell</td>
<td>790.7</td>
<td>664.0</td>
<td>552.0</td>
<td>429.9</td>
<td>324.3</td>
<td>267.0</td>
<td>155.9</td>
<td>111.8</td>
<td>86.6</td>
<td>69.8</td>
<td>47.9</td>
<td>39.0</td>
<td>20.6</td>
</tr>
<tr>
<td>1.67V/cell</td>
<td>822.0</td>
<td>690.5</td>
<td>560.0</td>
<td>437.9</td>
<td>329.0</td>
<td>269.6</td>
<td>156.5</td>
<td>113.1</td>
<td>87.0</td>
<td>70.0</td>
<td>48.1</td>
<td>39.1</td>
<td>20.6</td>
</tr>
<tr>
<td>1.60V/cell</td>
<td>845.3</td>
<td>700.5</td>
<td>569.2</td>
<td>442.0</td>
<td>333.3</td>
<td>269.9</td>
<td>158.5</td>
<td>114.8</td>
<td>87.5</td>
<td>70.5</td>
<td>48.3</td>
<td>39.8</td>
<td>20.6</td>
</tr>
</tbody>
</table>
Applications

- Telecommunication
- Railway signal
- Alarm and security system
- Power station systems
- Emergency power supply

General Features

- 20 years design life (25°C)
- Premium ABS+PC jar & covers, Flame Retardant to UL94 V-0
- High-rate performance, high energy density
- High quality AGM separators minimize electrical resistance to allow high current discharging properties

Standards

- Compliance with IEC 60896 standards
- Classified as “Very Long Life” according to Eurobat
- CE, UL Certified
- Manufactured in Leoch® IATF 16949, OHSAS 18001, ISO 9001 and ISO 14001 certified production facilities

Discharge Characteristics

- 12V Battery
- Temperature 25°C

Effects of Temperature on Discharging Time

- Capacity (%)
- Temperature (°C)

Float Charging Characteristics

- Charge Current
- Charge Voltage
- Charging Time (hours)

Float Life

- Charge Voltage
- Charging Time (Min)
- Temperature 25°C

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