LPL Series-Long Life Standby
LPL12-90H(12V90Ah)

Specifications

Rated Voltage 12V
Nominal Capacity 90.0 Ah (C10, 1.80V/cell)

Dimension
Length 306±3mm (12.05 inches)
Width 168±2mm (6.61 inches)
Container Height 208±3mm (8.19 inches)
Total Height 214±3mm (8.43 inches)

Approx Weight 27.1 Kg (59.76 Ibs)
Terminal T14
Container Material ABS

Rated Capacity (25°C)
95.4 Ah (20hr, 4.77A, 1.80V/cell)
90.0 Ah (10hr, 9.00A, 1.80V/cell)
82.5 Ah (5hr, 16.5A, 1.75V/cell)
75.3 Ah (3hr, 25.1A, 1.75V/cell)
58.0 Ah (1hr, 58.0A, 1.60V/cell)

Max. Discharge Current 1080A (5s)
Internal Resistance (25°C) Approx 5.0mΩ

Operating Temp. Range
Discharge -15°C to 50°C (5°C to 122°F)
Charge 0°C to 40°C (32°F to 104°F)
Storage -15°C to 40°C (5°F to 104°F)

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

Cycle Use Initial Charging Current less than 0A.
Voltage 14.4V to 15.0V at 25°C (77°F)
Temp. Coefficient -30mV/°C

Standby Use Initial Charging Current less than 27.0A.
Voltage 13.5V to 13.8V at 25°C (77°F)
Temp. Coefficient -20mV/°C

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

Self Discharge LPL series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.

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

<table>
<thead>
<tr>
<th>F.V./Time</th>
<th>10min</th>
<th>15min</th>
<th>20min</th>
<th>30min</th>
<th>45min</th>
<th>1h</th>
<th>2h</th>
<th>3h</th>
<th>4h</th>
<th>5h</th>
<th>6h</th>
<th>8h</th>
<th>10h</th>
<th>20h</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.85V/cell</td>
<td>134.5</td>
<td>116.6</td>
<td>91.7</td>
<td>82.0</td>
<td>60.0</td>
<td>50.8</td>
<td>30.9</td>
<td>22.7</td>
<td>17.8</td>
<td>15.5</td>
<td>13.6</td>
<td>10.5</td>
<td>8.68</td>
<td>4.61</td>
</tr>
<tr>
<td>1.80V/cell</td>
<td>152.6</td>
<td>132.1</td>
<td>103.7</td>
<td>89.3</td>
<td>63.5</td>
<td>52.6</td>
<td>32.0</td>
<td>24.6</td>
<td>19.0</td>
<td>16.3</td>
<td>14.6</td>
<td>11.0</td>
<td>9.00</td>
<td>4.77</td>
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<tr>
<td>1.75V/cell</td>
<td>165.5</td>
<td>143.0</td>
<td>111.9</td>
<td>91.1</td>
<td>65.8</td>
<td>55.2</td>
<td>33.6</td>
<td>25.1</td>
<td>19.4</td>
<td>16.5</td>
<td>14.8</td>
<td>11.1</td>
<td>9.18</td>
<td>4.82</td>
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<td>1.70V/cell</td>
<td>176.5</td>
<td>151.9</td>
<td>118.7</td>
<td>92.9</td>
<td>67.1</td>
<td>56.3</td>
<td>34.3</td>
<td>25.6</td>
<td>19.7</td>
<td>16.8</td>
<td>14.8</td>
<td>11.2</td>
<td>9.27</td>
<td>4.87</td>
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<tr>
<td>1.65V/cell</td>
<td>182.1</td>
<td>156.3</td>
<td>121.9</td>
<td>94.3</td>
<td>68.1</td>
<td>57.1</td>
<td>34.8</td>
<td>25.8</td>
<td>20.0</td>
<td>17.2</td>
<td>14.9</td>
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<td>9.39</td>
<td>4.93</td>
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<td>1.60V/cell</td>
<td>188.3</td>
<td>161.2</td>
<td>125.0</td>
<td>95.6</td>
<td>69.1</td>
<td>58.0</td>
<td>35.3</td>
<td>26.1</td>
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<td>17.4</td>
<td>15.0</td>
<td>11.6</td>
<td>9.50</td>
<td>4.99</td>
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Constant Power Discharge (Watts/cell) at 25°C (77°F)

<table>
<thead>
<tr>
<th>F.V./Time</th>
<th>10min</th>
<th>15min</th>
<th>20min</th>
<th>30min</th>
<th>45min</th>
<th>1h</th>
<th>2h</th>
<th>3h</th>
<th>4h</th>
<th>5h</th>
<th>6h</th>
<th>8h</th>
<th>10h</th>
<th>20h</th>
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</thead>
<tbody>
<tr>
<td>1.85V/cell</td>
<td>253.0</td>
<td>228.0</td>
<td>174.4</td>
<td>156.7</td>
<td>115.3</td>
<td>98.2</td>
<td>60.2</td>
<td>44.4</td>
<td>34.9</td>
<td>30.4</td>
<td>26.9</td>
<td>20.8</td>
<td>17.3</td>
<td>9.17</td>
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<tr>
<td>1.80V/cell</td>
<td>283.0</td>
<td>246.9</td>
<td>195.1</td>
<td>169.2</td>
<td>121.3</td>
<td>101.2</td>
<td>61.9</td>
<td>47.9</td>
<td>37.2</td>
<td>31.9</td>
<td>28.8</td>
<td>21.8</td>
<td>18.1</td>
<td>9.49</td>
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<tr>
<td>1.75V/cell</td>
<td>302.0</td>
<td>263.6</td>
<td>208.2</td>
<td>171.4</td>
<td>125.0</td>
<td>100.5</td>
<td>64.8</td>
<td>48.7</td>
<td>37.7</td>
<td>32.3</td>
<td>28.9</td>
<td>21.9</td>
<td>18.2</td>
<td>9.57</td>
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<tr>
<td>1.70V/cell</td>
<td>317.5</td>
<td>277.1</td>
<td>218.9</td>
<td>173.3</td>
<td>126.6</td>
<td>107.2</td>
<td>65.9</td>
<td>49.5</td>
<td>38.2</td>
<td>32.8</td>
<td>29.0</td>
<td>22.2</td>
<td>18.4</td>
<td>9.66</td>
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<tr>
<td>1.65V/cell</td>
<td>322.7</td>
<td>281.6</td>
<td>222.5</td>
<td>174.5</td>
<td>127.7</td>
<td>108.2</td>
<td>66.6</td>
<td>48.7</td>
<td>38.7</td>
<td>33.3</td>
<td>29.1</td>
<td>22.4</td>
<td>18.6</td>
<td>9.77</td>
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<tr>
<td>1.60V/cell</td>
<td>327.2</td>
<td>295.5</td>
<td>225.6</td>
<td>175.3</td>
<td>128.4</td>
<td>109.0</td>
<td>67.1</td>
<td>49.9</td>
<td>39.0</td>
<td>33.7</td>
<td>29.2</td>
<td>22.7</td>
<td>18.8</td>
<td>9.87</td>
</tr>
</tbody>
</table>
LPL Series-Long Life Standby
LPL12-90H(12V90Ah)

Applications
- UPS and EPS
- Emergency light
- Railway signal and aircraft signal system
- Marine and power stations
- Alarm and security system
- Electronic apparatus and equipment
- Communication power supply, DC power supply

General Features
- 12 years design life(25°C)
- Grid refining technology and the thicker plates are used to extend the battery standby life and reduce the plate grid corrosion speed
- Using oxygen recombination technology: maintenance-free
- Unique vent valve design: control water losing, prevent air and spark going inside

Discharge Characteristics

Float Charging Characteristics

Temperature Effects in Relation to Battery Capacity

Effect of Temperature on Long Term Float Life

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Subject to revisions without prior notice.
Publication No.: LB-LPL12-90H-PD-EN-V1.1-201904