PLH+C-Pure Lead Carbon
PLH+C 190FT (12V190Ah)

Specifications

- **Rated Voltage**: 12V
- **Nominal Capacity**: C10, 180Ah; C5, 190Ah
- **Dimension**: Length 559±1mm (22.01 inches), Width 125±1mm (4.92 inches), Container Height 320±1mm (12.6 inches), Total Height 320±1mm (12.6 inches)
- **Approx. Weight**: 57.6 Kg (127.0 lbs)
- **Terminal**: M8
- **Container Material**: PC-ABS flame retardant jar and cover to UL94 V-0
- **Rated Capacity (25°C)**: 190.0 Ah (10hr, 19.0A, 1.80V/cell), 190.4 Ah (8hr, 23.8A, 1.75V/cell), 187.0 Ah (5hr, 33.4A, 1.75V/cell), 132.9 Ah (3hr, 44.3A, 1.75V/cell), 101.8 Ah (1hr, 101.8A, 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)**: 13.62V
- **Temp. Coefficient**: -3mV/cell°C, Equalization 14.1~14.4V
- **Effect of temp. to Capacity**: 40°C (104°F) 103%, 25°C (77°F) 100%, 0°C (32°F) 88%
- **Self Discharge**: PLH+C 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 refreshing 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>271.5</td>
<td>212.6</td>
<td>176.7</td>
<td>139.8</td>
<td>107.3</td>
<td>87.5</td>
<td>53.2</td>
<td>41.6</td>
<td>36.8</td>
<td>32.7</td>
<td>22.7</td>
<td>18.9</td>
<td>10.1</td>
</tr>
<tr>
<td>1.80V/cell</td>
<td>300.1</td>
<td>229.0</td>
<td>191.6</td>
<td>149.8</td>
<td>114.3</td>
<td>93.0</td>
<td>55.1</td>
<td>43.1</td>
<td>37.1</td>
<td>33.1</td>
<td>23.4</td>
<td>19.0</td>
<td>10.3</td>
</tr>
<tr>
<td>1.75V/cell</td>
<td>324.5</td>
<td>243.2</td>
<td>205.0</td>
<td>156.4</td>
<td>119.8</td>
<td>97.0</td>
<td>57.9</td>
<td>44.3</td>
<td>37.5</td>
<td>33.4</td>
<td>23.8</td>
<td>19.7</td>
<td>10.6</td>
</tr>
<tr>
<td>1.70V/cell</td>
<td>343.6</td>
<td>263.4</td>
<td>224.7</td>
<td>165.7</td>
<td>123.4</td>
<td>100.3</td>
<td>58.9</td>
<td>45.6</td>
<td>38.5</td>
<td>33.8</td>
<td>24.0</td>
<td>19.3</td>
<td>10.6</td>
</tr>
<tr>
<td>1.67V/cell</td>
<td>358.2</td>
<td>273.6</td>
<td>222.4</td>
<td>169.3</td>
<td>125.5</td>
<td>101.8</td>
<td>59.9</td>
<td>46.9</td>
<td>39.4</td>
<td>34.6</td>
<td>24.2</td>
<td>20.1</td>
<td>10.7</td>
</tr>
<tr>
<td>1.60V/cell</td>
<td>359.1</td>
<td>288.8</td>
<td>232.2</td>
<td>175.1</td>
<td>129.8</td>
<td>104.3</td>
<td>60.8</td>
<td>48.1</td>
<td>40.4</td>
<td>35.0</td>
<td>24.3</td>
<td>20.1</td>
<td>10.7</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>
<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>499.5</td>
<td>408.7</td>
<td>341.7</td>
<td>272.3</td>
<td>210.9</td>
<td>173.0</td>
<td>103.7</td>
<td>85.8</td>
<td>73.8</td>
<td>65.1</td>
<td>45.4</td>
<td>37.7</td>
<td>20.1</td>
</tr>
<tr>
<td>1.80V/cell</td>
<td>538.1</td>
<td>433.5</td>
<td>370.5</td>
<td>292.7</td>
<td>225.5</td>
<td>184.2</td>
<td>109.0</td>
<td>87.2</td>
<td>74.7</td>
<td>65.8</td>
<td>46.3</td>
<td>38.1</td>
<td>20.5</td>
</tr>
<tr>
<td>1.75V/cell</td>
<td>575.5</td>
<td>467.5</td>
<td>391.5</td>
<td>306.5</td>
<td>234.1</td>
<td>190.6</td>
<td>112.2</td>
<td>86.5</td>
<td>75.6</td>
<td>65.8</td>
<td>46.9</td>
<td>38.9</td>
<td>20.9</td>
</tr>
<tr>
<td>1.70V/cell</td>
<td>611.8</td>
<td>480.7</td>
<td>409.0</td>
<td>317.8</td>
<td>241.2</td>
<td>195.7</td>
<td>114.5</td>
<td>89.8</td>
<td>75.7</td>
<td>65.8</td>
<td>47.2</td>
<td>39.2</td>
<td>20.9</td>
</tr>
<tr>
<td>1.67V/cell</td>
<td>628.7</td>
<td>505.8</td>
<td>416.0</td>
<td>322.8</td>
<td>244.3</td>
<td>196.8</td>
<td>115.5</td>
<td>90.3</td>
<td>75.9</td>
<td>65.8</td>
<td>47.3</td>
<td>39.4</td>
<td>21.0</td>
</tr>
<tr>
<td>1.60V/cell</td>
<td>638.4</td>
<td>524.9</td>
<td>424.4</td>
<td>327.8</td>
<td>246.3</td>
<td>199.2</td>
<td>116.5</td>
<td>91.0</td>
<td>76.3</td>
<td>66.0</td>
<td>47.4</td>
<td>40.9</td>
<td>21.0</td>
</tr>
</tbody>
</table>
PLH+C-Pure Lead Carbon
PLH+C 190FT (12V190Ah)

Applications
- Backup Power
- Grid-connected Energy Storage System
- Off-grid Energy Storage System
- Demand charge reduction
- Time-of-Use bill management

General Features
- High energy density
- Low internal resistance and self-discharge rate
- Excellent fast charging acceptance: 1.5hour to 90% SOC
- Excellent high rate discharge performance in low temperature
- Super high PSoC cycle life

Standards
- Compliance with IEC 60896 standards
- Manufactured in Leoch®IATF16949, OHSAS 18001, ISO 9001 and ISO 14001 certified production facilities

Discharge Characteristics

Temperature in Relation to Capacity

Cycle Life vs. Depth of Discharge

Self-discharge Characteristics

Sales Offices Worldwide

China Sales Office
5th Floor, Xibaohu Bldg., Nanhai Blvd., Nanhai, Shenzhen, China. 518052
Tel: +86-755-26085890 (100 lines)
Fax: +86-755-26085799
E-mail: export@leoch.com

HongKong Sales Office
Workshop C, 3/F, TWN Tower, No. 3 Ho Ii Shing Road, Toauen Wan, New Territories, Hong Kong
Tel: +852 35188646
Fax: +852 35186969
E-mail: sales.hk@leoch.com

UK Sales Office
98 Wheatsheaf Court, Waterlooville Business Park, Cumberley, LD24AE, UK United Kingdom
Tel: +44(0) 1452 296230 / 1452 296956
Fax: +44 1452 690125
E-mail: Sales.Europe@leoch.com

Singapore Sales Office
No. 1 Tech Park Crescent, Singapore 639131
Tel: +65 68835079
Fax: +65 6883 5079
Email sales.sg@leoch.com

EMEA Sales Office
1 Deligiorgi St., 1213 Athens, Greece
Tel: +30 210 5160013 (2 lines)
E-mail support_EMEA@leoch.com

Australia Sales Office
2/290 Talinga Place, Smithfield, NSW 2164
Australia
Tel: 02 9756 3550
E-mail: sales.au@leoch.com

India Sales Office
Shah no.A-519), 2nd Stage of Poenya Industrial Area, Banglore North Taluk, Banglore-560058, India
Tel: +91-40-23440367/34403039
Fax: +91-40-23440017
E-mail: leochindia@leoch.com

Http://www.leoch.com
Http://www.leoch.us

© 2019 LEUCH, All rights reserved.
Trademarks and logos are the property of LEUCH and its affiliates unless otherwise noted.
Subject to revisions without prior notice.
Publication No.: LS-PLH+C 190FT/FT-EN V3.1-201905