Sealed Lead-Acid Battery


**UB12550**

Maintenance-Free

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**Specification**

- **Nominal Voltage**: 12 volts
- **Nominal Capacity**:
  - 20-hr. (2.75A): 55.0 Ah
  - 10-hr. (5.12A): 51.2 Ah
  - 5-hr. (9.36A): 46.8 Ah
  - 1-hr. (33.0A): 33.0 Ah
- **Approximate Weight**: 35.5 lbs (16.1 kgs)
- **Internal Resistance**: 10mΩ
- **Shelf Life**: 3 Months 6 Months 12 Months
  - 91% 83% 64%
- **Temperature Dependency of Capacity** (20 hour rate)
  - 104°F (40°C) 77°F (25°C) 32°F (0°C) 5°F (-15°C)
  - 102% 100% 85% 65%
- **AGM Operational Temperature**
  - Charge: 32°F to 104°F (0°C to 40°C)
  - Discharge: 5°F to 113°F (-15°C to 45°C)
- **AGM Storage Temperature**: 5°F to 104°F (-15°C to 40°C)

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**Physical Dimensions: in (mm)**

- **L**: 9.06 in (230 mm)
- **W**: 5.44 in (138.1 mm)
- **H**: 8.27 in (210 mm)
- **TH**: 9.13 in (231.8 mm)

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**Constant Current Discharge Characteristics**   Unit:A (25°C, 77°F)

<table>
<thead>
<tr>
<th>F.V./Time</th>
<th>5MIN</th>
<th>10MIN</th>
<th>15MIN</th>
<th>30MIN</th>
<th>1HR</th>
<th>2HR</th>
<th>3HR</th>
<th>4HR</th>
<th>5HR</th>
<th>8HR</th>
<th>10HR</th>
<th>20HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.60V</td>
<td>182.8</td>
<td>133.4</td>
<td>93.9</td>
<td>56.8</td>
<td>29.6</td>
<td>17.3</td>
<td>12.7</td>
<td>9.9</td>
<td>8.2</td>
<td>5.7</td>
<td>5.2</td>
<td>2.8</td>
</tr>
<tr>
<td>10.20V</td>
<td>161.0</td>
<td>121.5</td>
<td>84.0</td>
<td>53.8</td>
<td>27.9</td>
<td>16.5</td>
<td>12.4</td>
<td>9.6</td>
<td>8.0</td>
<td>5.6</td>
<td>5.0</td>
<td>2.7</td>
</tr>
<tr>
<td>10.50V</td>
<td>155.1</td>
<td>115.6</td>
<td>79.0</td>
<td>52.4</td>
<td>27.2</td>
<td>16.1</td>
<td>12.1</td>
<td>9.5</td>
<td>7.9</td>
<td>5.6</td>
<td>4.9</td>
<td>2.7</td>
</tr>
<tr>
<td>10.80V</td>
<td>149.2</td>
<td>109.7</td>
<td>74.1</td>
<td>50.9</td>
<td>26.2</td>
<td>15.7</td>
<td>11.8</td>
<td>9.3</td>
<td>7.7</td>
<td>5.4</td>
<td>4.9</td>
<td>2.7</td>
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<tr>
<td>11.10V</td>
<td>143.3</td>
<td>103.7</td>
<td>69.2</td>
<td>49.4</td>
<td>25.2</td>
<td>15.3</td>
<td>11.4</td>
<td>9.0</td>
<td>7.5</td>
<td>5.3</td>
<td>4.7</td>
<td>2.5</td>
</tr>
</tbody>
</table>

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**Constant Power Discharge Characteristics**   Unit:W (25°C, 77°F)

<table>
<thead>
<tr>
<th>F.V./Time</th>
<th>5MIN</th>
<th>10MIN</th>
<th>15MIN</th>
<th>30MIN</th>
<th>1HR</th>
<th>2HR</th>
<th>3HR</th>
<th>4HR</th>
<th>5HR</th>
<th>8HR</th>
<th>10HR</th>
<th>20HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.60V</td>
<td>1940.9</td>
<td>1465.7</td>
<td>996.9</td>
<td>603.2</td>
<td>343.3</td>
<td>200.1</td>
<td>147.2</td>
<td>114.6</td>
<td>94.4</td>
<td>66.7</td>
<td>60.3</td>
<td>32.5</td>
</tr>
<tr>
<td>10.20V</td>
<td>1787.8</td>
<td>1349.1</td>
<td>932.2</td>
<td>597.7</td>
<td>322.6</td>
<td>191.2</td>
<td>143.3</td>
<td>111.6</td>
<td>94.1</td>
<td>65.2</td>
<td>58.8</td>
<td>31.6</td>
</tr>
<tr>
<td>10.50V</td>
<td>1759.1</td>
<td>1311.1</td>
<td>896.1</td>
<td>593.8</td>
<td>312.2</td>
<td>186.7</td>
<td>139.8</td>
<td>109.7</td>
<td>91.4</td>
<td>64.7</td>
<td>57.8</td>
<td>31.2</td>
</tr>
<tr>
<td>10.80V</td>
<td>1736.4</td>
<td>1276.5</td>
<td>862.5</td>
<td>592.3</td>
<td>303.8</td>
<td>182.8</td>
<td>136.8</td>
<td>107.7</td>
<td>89.9</td>
<td>63.2</td>
<td>57.3</td>
<td>31.1</td>
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<td>11.10V</td>
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<td>1234.5</td>
<td>823.0</td>
<td>587.9</td>
<td>299.9</td>
<td>182.3</td>
<td>135.4</td>
<td>107.2</td>
<td>89.4</td>
<td>62.7</td>
<td>55.8</td>
<td>30.1</td>
</tr>
</tbody>
</table>

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All specifications subject to change without notice.

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## Discharge Time vs. Discharge Current

![Discharge Time vs. Discharge Current Graph](image)

Discharge Current = CA X Nominal Capacity

## Discharge Characteristics

![Discharge Characteristics Graph](image)

## Shelf Life & Storage

![Shelf Life & Storage Graph](image)

- Charging is not necessary unless 100% of capacity is required.
- Charging before use is necessary to help recover full capacity.
- Charge may fail to reach full capacity. Do not let batteries reach this state.

## Cycle Life vs Depth of Discharge

![Cycle Life vs Depth of Discharge Graph](image)

## Open Circuit Voltage vs Residual Capacity

![Open Circuit Voltage vs Residual Capacity Graph](image)

## Effect of Temperature on Capacity

![Effect of Temperature on Capacity Graph](image)

## Charge Current & Final Discharge Voltage

<table>
<thead>
<tr>
<th>Application</th>
<th>Charge Voltage (V/Cell)</th>
<th>Max. Charge Current</th>
<th>Final Discharge Voltage (V/Cell)</th>
<th>Final Discharge Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle Use</td>
<td>25°C (77°F)</td>
<td>2.45</td>
<td>2.43-2.47</td>
<td>0.30C</td>
</tr>
<tr>
<td>Standby</td>
<td>25°C (77°F)</td>
<td>2.28</td>
<td>2.27-2.30</td>
<td>0.2C&lt; (A)</td>
</tr>
</tbody>
</table>

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