### OPzV Series-Tubular Gel

#### 12V 4OPzV80(12V80Ah)

**Specifications**

- **Rated Voltage**: 12V
- **Nominal Capacity**: 80.0Ah (C10, 1.80V/cell)
- **Dimension**:
  - Length: 330mm (12.99in.)
  - Width: 173mm (6.81in.)
  - Container Height: 212mm (8.35in.)
  - Total Height: 218mm (8.58in.)
- **Approx Weight**: 30.8Kg (67.9 lbs)
- **Terminal**: M8
- **Container Material**: ABS

**Rated Capacity (25°C)**

<table>
<thead>
<tr>
<th>Capacity</th>
<th>80.0 Ah</th>
<th>70.0 Ah</th>
<th>60.6 Ah</th>
<th>47.4 Ah</th>
</tr>
</thead>
<tbody>
<tr>
<td>(10hr, 8.00A, 1.80V/cell)</td>
<td>(8hr, 9.00A, 1.80V/cell)</td>
<td>(9hr, 10.0A, 1.75V/cell)</td>
<td>(11hr, 12.0A, 1.70V/cell)</td>
<td></td>
</tr>
</tbody>
</table>

**Max. Discharge Current (5s)**

- 640A

**Internal Resistance (25°C)**

- Approx. 7.8mΩ

**Operating Temp. Range**

- Discharge: -20°C~55°C (-4°F~131°F)
- Charge: 0°C~40°C (32°F~104°F)
- Storage: -20°C~50°C (-4°F~122°F)

**Nominal Operating Temp. Range**

- 25±3°C (77±5°F)

**Max. Charging Current (25°C)**

- 20.0A

**Charge voltage (25°C)**

- Float: 13.5V
- Temp. Coefficient: -3mV/cell°C
- Cycle (Equalization): 14.1~14.4V

**Charge Configuration (OPzV80)**

- 40°C (104°F): 106%
- 25°C (77°F): 100%
- 0°C (32°F): 86%

**Effect of Temp. to Capacity**

- ≤3% per month at 25°C

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

<table>
<thead>
<tr>
<th>F/V Time</th>
<th>10min</th>
<th>15min</th>
<th>30min</th>
<th>1hr</th>
<th>2hr</th>
<th>3hr</th>
<th>5hr</th>
<th>8hr</th>
<th>10hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.85V/cell</td>
<td>77.2</td>
<td>68.1</td>
<td>50.9</td>
<td>37.2</td>
<td>23.6</td>
<td>18.0</td>
<td>12.9</td>
<td>9.04</td>
<td>7.64</td>
</tr>
<tr>
<td>1.80V/cell</td>
<td>92.8</td>
<td>78.7</td>
<td>57.1</td>
<td>40.8</td>
<td>25.5</td>
<td>19.3</td>
<td>13.5</td>
<td>9.44</td>
<td>8.00</td>
</tr>
<tr>
<td>1.75V/cell</td>
<td>106.5</td>
<td>87.9</td>
<td>61.4</td>
<td>43.4</td>
<td>26.8</td>
<td>20.2</td>
<td>14.0</td>
<td>9.68</td>
<td>8.16</td>
</tr>
<tr>
<td>1.70V/cell</td>
<td>116.3</td>
<td>95.4</td>
<td>65.8</td>
<td>45.9</td>
<td>27.8</td>
<td>21.0</td>
<td>14.4</td>
<td>9.84</td>
<td>8.24</td>
</tr>
<tr>
<td>1.67V/cell</td>
<td>127.2</td>
<td>102.4</td>
<td>68.8</td>
<td>47.4</td>
<td>28.7</td>
<td>21.7</td>
<td>14.7</td>
<td>10.0</td>
<td>8.40</td>
</tr>
<tr>
<td>1.60V/cell</td>
<td>135.7</td>
<td>108.3</td>
<td>71.4</td>
<td>48.8</td>
<td>29.7</td>
<td>22.2</td>
<td>15.0</td>
<td>10.2</td>
<td>8.56</td>
</tr>
</tbody>
</table>

#### 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>30min</th>
<th>1hr</th>
<th>2hr</th>
<th>3hr</th>
<th>5hr</th>
<th>8hr</th>
<th>10hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.85V/cell</td>
<td>127.0</td>
<td>116.8</td>
<td>97.1</td>
<td>72.4</td>
<td>46.1</td>
<td>35.2</td>
<td>25.4</td>
<td>17.9</td>
<td>15.3</td>
</tr>
<tr>
<td>1.80V/cell</td>
<td>153.6</td>
<td>139.2</td>
<td>109.0</td>
<td>79.0</td>
<td>49.7</td>
<td>37.6</td>
<td>26.6</td>
<td>18.7</td>
<td>15.9</td>
</tr>
<tr>
<td>1.75V/cell</td>
<td>178.6</td>
<td>153.6</td>
<td>116.2</td>
<td>83.7</td>
<td>52.0</td>
<td>39.4</td>
<td>27.5</td>
<td>19.2</td>
<td>16.2</td>
</tr>
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<td>1.70V/cell</td>
<td>196.8</td>
<td>165.4</td>
<td>123.3</td>
<td>88.0</td>
<td>53.6</td>
<td>40.6</td>
<td>28.2</td>
<td>19.5</td>
<td>16.4</td>
</tr>
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<td>207.4</td>
<td>172.2</td>
<td>127.7</td>
<td>90.4</td>
<td>55.1</td>
<td>41.9</td>
<td>28.7</td>
<td>19.8</td>
<td>16.6</td>
</tr>
<tr>
<td>1.60V/cell</td>
<td>212.8</td>
<td>175.7</td>
<td>131.1</td>
<td>92.6</td>
<td>56.7</td>
<td>42.6</td>
<td>29.3</td>
<td>20.1</td>
<td>16.9</td>
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OPzV Series-Tubular Gel
12V 4OPzV80(12V80Ah)

Applications
- Telecommunications
- Radio and cellular telephone relay stations
- Emergency lighting systems
- Power stations, Conventional power stations, alternative power (solar, wind)
- Large UPS and computer back-up
- Railway signaling
- Maritime standby power on ships and ashore
- Process and control engineering
- Standby power
- Buoys lighting

General Features
- 16 years design life (20°C)
- Better recovery performance
- Wide working temperature range (-20~55°C)
- No electrolyte stratification provides longer service life
- High recombination efficient
- Build in copper core based in lead will carry large current
- Separator imported form AMER-SIL high porosity,
  PVC-SiO2 and low resistance
- Paste negative plate special grid design increase the active material availability large current discharge and charge ability
- Tubular type positive plate (polyester tube) prevent the active material from falling. Multi metal alloy pressed positive grid increase the anti corrosion ability and service life

Charge voltage vs ambient temperature curve

Temperature effects in relation to battery capacity

Cycle Life in Relation to DOD

General Relation of Capacity VS. Storage Time

Standards
- Compliance with IEC 60896, IEC 61427, DIN 40742 standards
- UL, CE Certified
- Manufactured in Leoch®IATF16949,
  OHSAS 18001, ISO 9001 and ISO 14001 certified production facilities

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