

NPD series designed for applications that typically discharge 60% to 70% or more of the battery capacity. The battery is typically feature thick plates with high density active material. The thick battery plates allow for reserve energy to be stored deep within the battery plates and released during slow discharging such as trolling or solar applications. The high density material remains within the batteries' plate/grid structure longer, resisting the normal degradation found in cycling conditions. The battery is typically used for great extent discharge and recharged. The battery uses a different chemistry for the plates' active paste material and a slightly stronger acid. This chemistry allows for a much longer life in deep cycle applications with only a slightly reduction in maximum power output.



| Performance Characteristics  |  |                |
|--|--|----------------|
| <b>General Information</b>   | Length                                     | 260 mm         |
|  | Width                                      | 169 mm         |
|  | Height                                     | 211 mm         |
|  | Total Height                               | 215 mm         |
|  | Approx Weight                              | 26.1 kg ± 3%   |
|  | Nominal Voltage                            | 12 Volt        |
|  | Number of Cells                            | 6              |
|  | Nominal Capacity (20 hour rate)            | 85 Ah          |
|  | Terminal                                   | M6             |
|  | <b>Casing Material</b>                     | Standard       |
| Optional - UL94 V0, Flame Retardant  |  | ABS            |
| <b>Nominal Capacity 77°F (25°C)</b>  | 20 hour rate @ 1.80V (4.25A)               | 85 Ah          |
|  | 10 hour rate @ 1.80V (7.65A)               | 76.5 Ah        |
|  | 5 hour rate @ 1.70V (13.8A)                | 69 Ah          |
| <b>Internal Resistance</b>   | Fully Charged Battery 77°F (25°C) ≤ 5.5 mΩ |                |
| <b>Max. Discharge current in 5 sec</b>   | 900 A                                      |                |
| <b>Capacity affected by Temperature</b>  | 104°F (40°C) @ 20 hour rate                | 102%           |
|  | 77°F (25°C) @ 20 hour rate                 | 100%           |
|  | 32°F (0°C) @ 20 hour rate                  | 85%            |
|  | 5°F (-15°C) @ 20 hour rate                 | 65%            |
| <b>Reserve capacity to 10.5V at 27°C<br/>(the number of minutes a battery at 25A or 75A)</b> | @ 25Amps                                   | 130 mins       |
|  | @ 75Amps                                   | 34 mins        |
| <b>Constant voltage charging @ 77°F (25°C)</b>   | Initial charging current                   | ≤ 19.1 A       |
|  | Boost charging voltage                     | 14.4V to 14.9V |
|  | Float charging voltage                     | 13.6V to 13.8V |

| Constant Current Discharge Data (Amperes at 25°C) |       |       |       |       |      |      |      |      |      |      |      |
|---|-------|-------|-------|-------|------|------|------|------|------|------|------|
| End Point Volts/Cell                              | 10min | 15min | 30min | 45min | 1hr  | 2hr  | 3hr  | 5hr  | 8hr  | 10hr | 20hr |
| 1.60V   | 129   | 109   | 69.7  | 51.4  | 47.2 | 30.0 | 21.0 | 14.3 | 9.43 | 8.42 | 4.70 |
| 1.65V   | 126   | 107   | 68.4  | 50.5  | 46.3 | 29.4 | 20.6 | 14.0 | 9.27 | 8.26 | 4.57 |
| 1.70V   | 124   | 105   | 67.1  | 49.5  | 45.5 | 28.9 | 20.3 | 13.8 | 9.11 | 8.10 | 4.49 |
| 1.75V   | 122   | 103   | 65.9  | 48.6  | 44.6 | 28.3 | 19.9 | 13.5 | 8.95 | 7.97 | 4.41 |
| 1.80V   | 117   | 99    | 63.3  | 46.8  | 42.9 | 27.2 | 19.1 | 13.0 | 8.58 | 7.65 | 4.25 |

| Constant Power Discharge Data (Watts per cell at 25°C) |       |       |       |       |      |      |      |      |      |      |      |
|--|-------|-------|-------|-------|------|------|------|------|------|------|------|
| End Point Volts/Cell                                   | 10min | 15min | 30min | 45min | 1hr  | 2hr  | 3hr  | 5hr  | 8hr  | 10hr | 20hr |
| 1.60V  | 247   | 211   | 134   | 99.0  | 90.9 | 57.7 | 40.5 | 27.5 | 18.2 | 16.2 | 8.99 |
| 1.65V  | 243   | 207   | 132   | 97.2  | 89.3 | 56.6 | 39.7 | 27.0 | 17.9 | 15.9 | 8.82 |
| 1.70V  | 238   | 203   | 129   | 95.4  | 87.6 | 55.6 | 39.0 | 26.5 | 17.5 | 15.6 | 8.66 |
| 1.75V  | 234   | 199   | 127   | 93.6  | 85.9 | 54.5 | 38.3 | 26.0 | 17.2 | 15.3 | 8.50 |
| 1.80V  | 225   | 191   | 122   | 90.0  | 82.6 | 52.5 | 36.8 | 25.1 | 16.5 | 14.7 | 8.18 |

Above data provided from tested samples is generally for descriptive only. It is not intent to make or imply any representation; guarantee or warranty with respect to any battery cell. Battery cell designs/specifications are subject to modify without prior notice.