

## NPD6-180Ah 6V180Ah

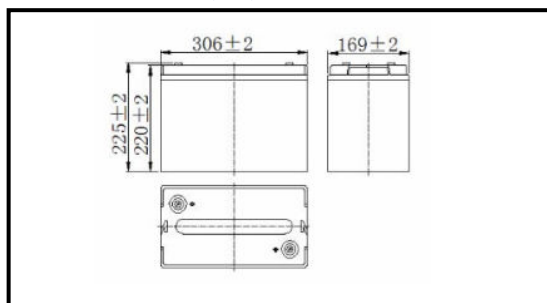
### Valve Regulated Lead Acid Battery



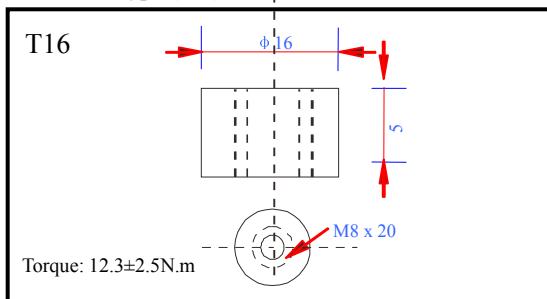
#### ● Specifications

|                       |                       |                     |
|-----------------------|-----------------------|---------------------|
| Nominal voltage       | 6V (3 cells per unit) |                     |
| Rated capacity (10HR) | 180Ah/5.4V            |                     |
| Dimensions            | Length                | 306±2mm (12.05inch) |
|                       | Width                 | 169±2mm (6.65inch)  |
|                       | Height                | 220±2mm (8.66inch)  |
|                       | Total height          | 225±2mm (8.86inch)  |
| Approx. weight        | 29.50kg (65.00lbs)±3% |                     |

#### ● Outer dimensions (mm)



#### ● Terminal type (mm)



#### ● Characteristics

|   |   |  |
|---|---|--|
| Capacity (25°C)                           | 10HR (5.4V)                                 | 180Ah  |
|   | 3HR (5.4V)                                  | 135Ah  |
|   | 1HR (5.25V)                                 | 102Ah  |
| Terminal type                             |   | T16  |
| Internal resistance (Fully charged, 25°C) |   | Approx. 2mΩ  |
| Capacity affected by temperature (10HR)   | 40°C  | 102%   |
|   | 25°C  | 100%   |
|   | 0°C   | 85%  |
|   | -15°C                                       | 65%  |
| Self-discharge (25°C)                     | 3 months                                    | Remaining capacity: 91%                                |
|   | 6 months                                    | Remaining capacity: 82%                                |
|   | 12 months                                   | Remaining capacity: 65%                                |
| Nominal operating temperature             |   | 25°C±3°C (77°F±5°F)                                    |
| Operating temperature range               | Discharge                                   | -15°C~50°C (5°F~122°F)                                 |
|   | Charge                                      | -10°C~50°C (14°F~122°F)                                |
|   | Storage                                     | -20°C~50°C (-4°F~122°F)                                |
| Float charging voltage (25°C)             |   | 6.75 to 6.90V Temperature compensation: -9mV/°C/Block  |
| Cyclic charging voltage (25°C)            |   | 7.25 to 7.50V Temperature compensation: -15mV/°C/Block |
| Maximum charging current                  |   | 54A  |
| Maximum discharge current                 |   | 1250A (5 sec.)   |
| Design life                               | 10 years for floating (25°C)                |  |
|   | Eurobat (20°C): 6-9 years, general purpose. |  |

#### ● Construction

| Component    | Positive plate | Negative plate | Container | Cover | Separator | Electrolyte   | Safety valve | Terminal |
|--------------|----------------|----------------|-----------|-------|-----------|---------------|--------------|----------|
| Raw material | Lead dioxide   | Lead           | ABS       | ABS   | AGM       | Sulfuric acid | Rubber       | Copper   |

#### ● Constant current discharge characteristics unit: Ampere/Block (at 25°C, 77°F)

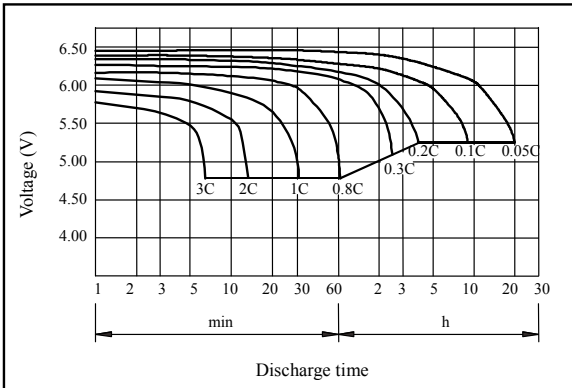
| F.V/Time | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
|----------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| 4.80V    | 403   | 311   | 186   | 114   | 67.6 | 48.7 | 38.9 | 33.2 | 22.8 | 18.8 | 9.98 |
| 4.95V    | 391   | 303   | 182   | 113   | 67.2 | 48.4 | 38.6 | 33.0 | 22.7 | 18.8 | 9.96 |
| 5.10V    | 375   | 292   | 177   | 110   | 66.6 | 48.1 | 38.4 | 32.8 | 22.5 | 18.7 | 9.93 |
| 5.25V    | 359   | 282   | 172   | 106   | 65.6 | 47.7 | 38.1 | 32.6 | 22.4 | 18.6 | 9.87 |
| 5.40V    | 339   | 267   | 166   | 103   | 63.9 | 46.3 | 37.0 | 31.6 | 21.7 | 18.5 | 9.81 |

#### ● Constant power discharge characteristics unit: Watt/Block (at 25°C, 77°F)

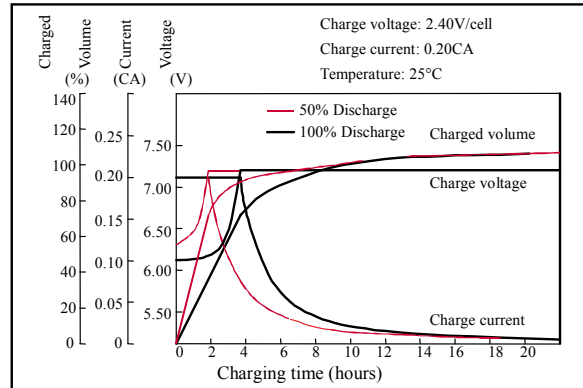
| F.V/Time | 10min | 15min | 30min | 60min | 2h  | 3h  | 4h  | 5h  | 8h  | 10h | 20h  |
|----------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|------|
| 4.80V    | 2178  | 1706  | 1043  | 652   | 391 | 286 | 229 | 196 | 136 | 112 | 59.9 |
| 4.95V    | 2112  | 1665  | 1022  | 642   | 389 | 285 | 227 | 195 | 135 | 112 | 59.8 |
| 5.10V    | 2025  | 1604  | 991   | 626   | 386 | 283 | 226 | 194 | 134 | 112 | 59.6 |
| 5.25V    | 1938  | 1549  | 967   | 606   | 380 | 281 | 224 | 192 | 133 | 111 | 59.2 |
| 5.40V    | 1829  | 1467  | 931   | 587   | 370 | 272 | 217 | 187 | 129 | 110 | 58.8 |

Note 1: Above characteristics data can be obtained within three charge and discharge cycles.

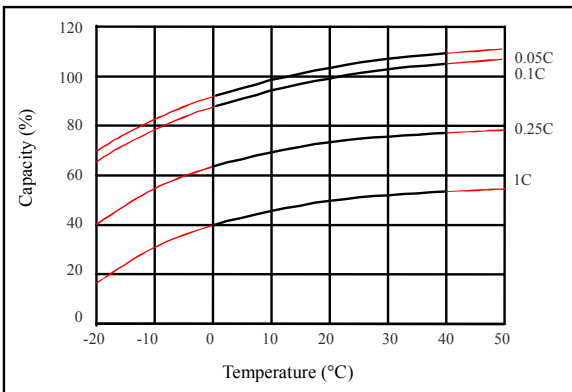
### ● Discharge characteristics (25°C)



### ● Charging characteristics (25°C)



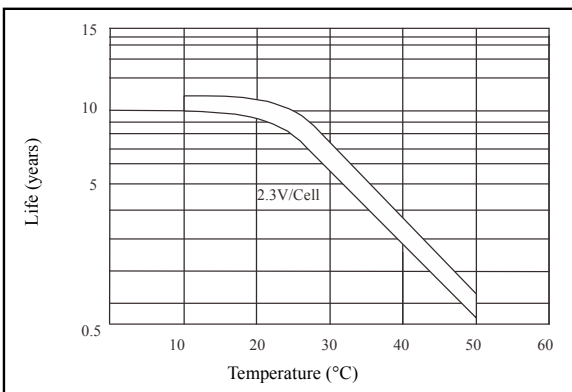
### ● Temperature effects on capacity



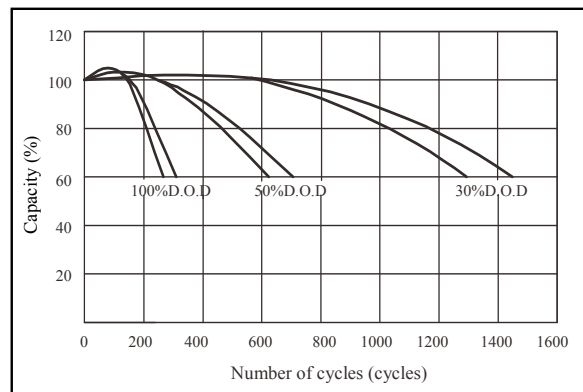
### ● Self-discharge characteristics



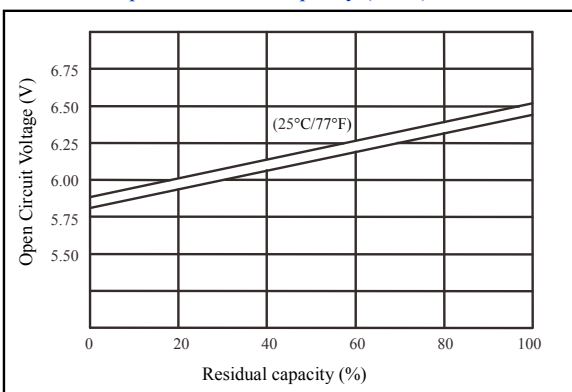
### ● Floating life on temperature



### ● Cycle life on D.O.D (25°C)



### ● Relationship for OCV and capacity (25°C)



### ● Relationship for charging voltage and temperature

