

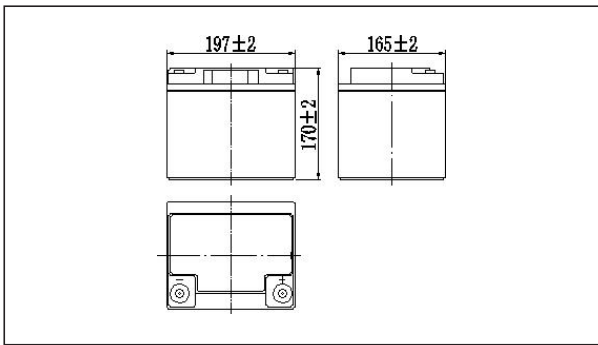
## NPG12-38Ah 12V38Ah

### Specifications

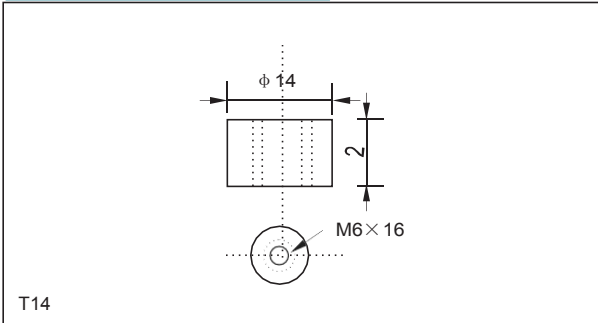
|                               |              |                   |
|-------------------------------|--------------|-------------------|
| Nominal Voltage               |              | 12V               |
| Rated capacity (20 hour rate) |              | 38Ah              |
| Dimensions                    | Length       | 197±2mm(7.76inch) |
|                               | Width        | 165±2mm(6.50inch) |
|                               | Height       | 170±2mm6.69inch)  |
|                               | Total Height | 170±2mm(6.69inch) |
| Approx. Weight                |              | 11.0kg±4%         |



### Outer dimensions (mm)



### Terminal Type (mm)



### Characteristics

|                                          |             |                                                    |
|------------------------------------------|-------------|----------------------------------------------------|
| Capacity (25°C)                          | 20HR(10.8V) | 38Ah                                               |
|                                          | 10HR(10.8V) | 34.5Ah                                             |
|                                          | 1HR(10.5V)  | 21Ah                                               |
| Terminal type                            |             | T14                                                |
| Internal resistance (Fully charged,25°C) |             | Approx.10m Ω                                       |
| Capacity affected by temperature (20HR)  | 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)             |             | 13.50 to 13.80V Temperature compensation: -18mV/°C |
| Cyclic charging voltage(25°C)            |             | 14.40 to 14.70V Temperature compensation: -30mV/°C |
| Maximum charging current                 |             | 11.4A                                              |
| Maximum discharge current                |             | 380A(5 sec.)                                       |
| Designed floating life(20°C)             |             | 10years                                            |

### 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:A(25°C,77°F)

| F.V/Time | 10min | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
|----------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| 9.60V    | 82.8  | 63.8  | 38.2  | 23.5  | 13.9 | 10.0 | 7.98 | 6.82 | 4.69 | 3.87 | 2.05 |
| 9.90V    | 80.4  | 62.3  | 37.4  | 23.1  | 13.8 | 9.94 | 7.94 | 6.78 | 4.66 | 3.86 | 2.05 |
| 10.2V    | 77.0  | 60.0  | 36.3  | 22.5  | 13.7 | 9.87 | 7.88 | 6.73 | 4.63 | 3.85 | 2.04 |
| 10.5V    | 73.7  | 58.0  | 35.4  | 21.8  | 13.5 | 9.80 | 7.83 | 6.69 | 4.60 | 3.83 | 2.03 |
| 10.8V    | 69.6  | 54.9  | 34.1  | 21.1  | 13.1 | 9.51 | 7.59 | 6.49 | 4.46 | 3.80 | 2.01 |

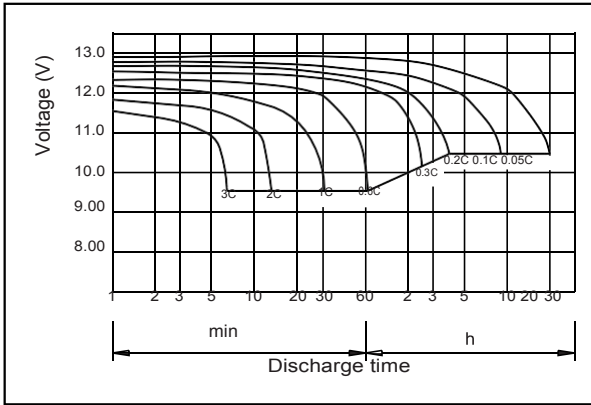
### Constant Power Discharge Characteristics Unit:W(25°C,77°F)

| F.V/Time | 10min | 15min | 30min | 60min | 2h  | 3h  | 4h   | 5h   | 8h   | 10h  | 20h  |
|----------|-------|-------|-------|-------|-----|-----|------|------|------|------|------|
| 9.60V    | 895   | 701   | 428   | 268   | 161 | 118 | 93.9 | 80.6 | 55.7 | 46.2 | 24.6 |
| 9.90V    | 868   | 684   | 420   | 264   | 160 | 117 | 93.3 | 80.2 | 55.4 | 46.1 | 24.6 |
| 10.2V    | 832   | 659   | 407   | 257   | 158 | 116 | 92.7 | 79.6 | 55.0 | 46.0 | 24.5 |
| 10.5V    | 796   | 636   | 397   | 249   | 156 | 115 | 92.1 | 79.1 | 54.6 | 45.7 | 24.3 |
| 10.8V    | 752   | 603   | 383   | 241   | 152 | 112 | 89.3 | 76.7 | 53.0 | 45.4 | 24.2 |

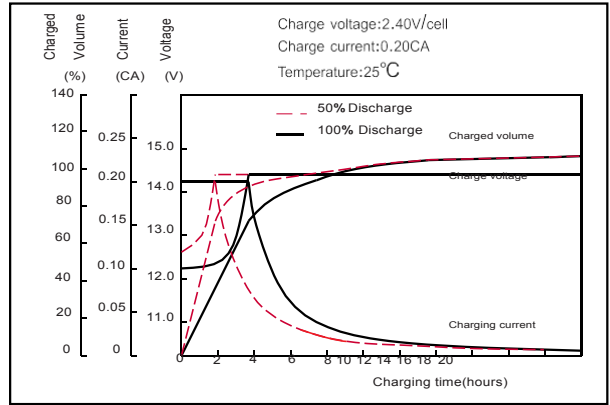
Note: The above characteristics data can be obtained within three charge or discharge cycles.

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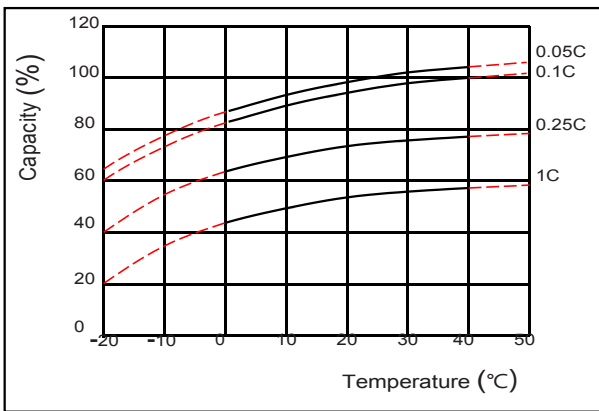
● Discharge characteristics(25°C)



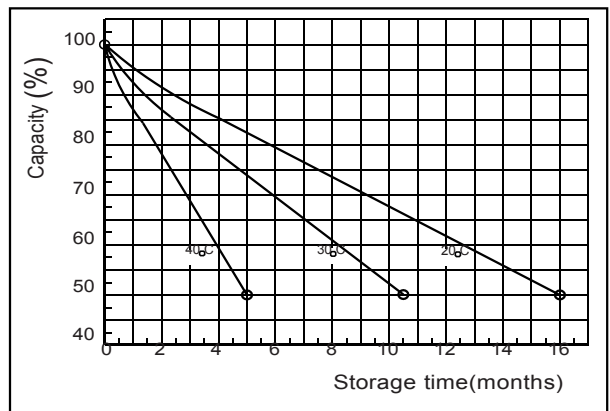
● Charging characteristics (25°C)



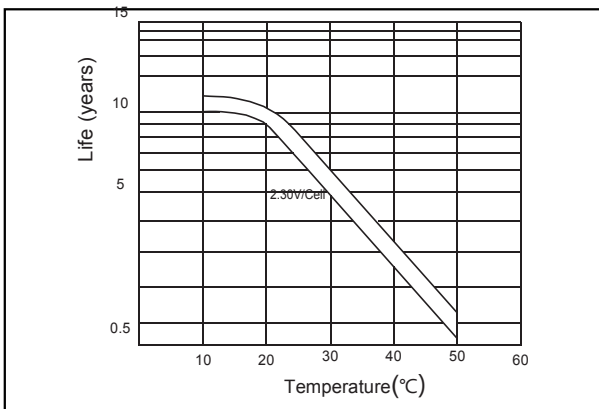
● Temperature effects on Capacity



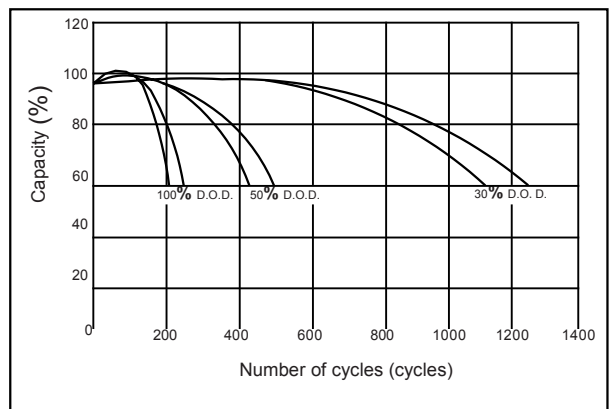
● Self-discharge characteristics



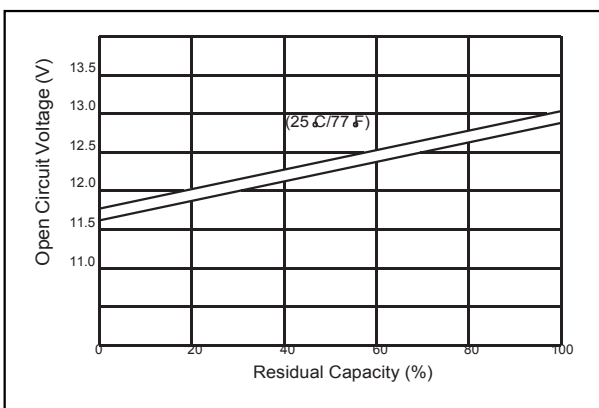
● Floating life on Temperature



● Cycle life on D.O.D (25°C)



● The relationship for OCV and Capacity (25°C)



● The relationship for Charging voltage and Temperature

