

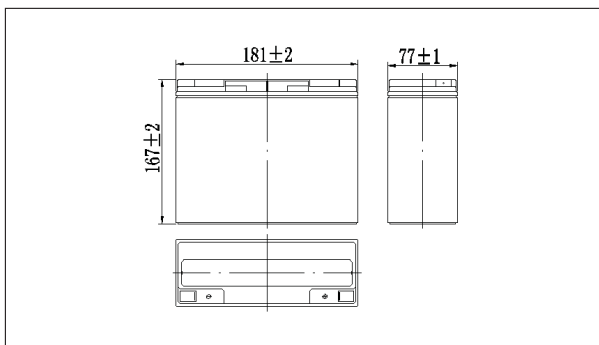
NP12-20Ah 12V20Ah

Specifications

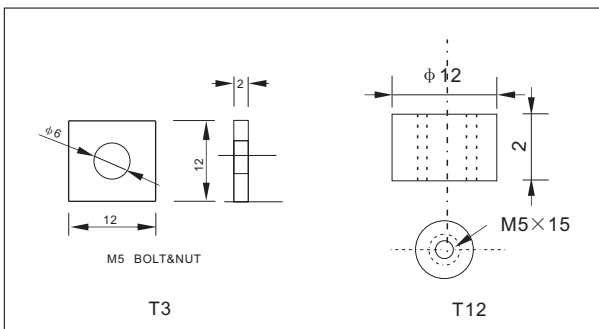
| | | |
|-------------------------------|--------------|-------------------|
| Nominal Voltage | | 12V |
| Rated capacity (20 hour rate) | | 20Ah |
| Dimensions | Length | 181±2mm(7.13inch) |
| | Width | 77±1mm(3.03inch) |
| | Height | 167±2mm(6.57inch) |
| | Total Height | 167±2mm(6.57inch) |
| Approx. Weight | | 5.7kg(12.6lbs)±4% |



Outer dimensions (mm)



Terminal Type (mm)



Characteristics

| | | |
|---|-------------|--|
| Capacity (25°C) | 20HR(10.5V) | 20Ah |
| | 10HR(10.5V) | 19Ah |
| | 1HR(9.60V) | 12Ah |
| Terminal type | | T3/T12 |
| Internal resistance (Fully charged, 25°C) | | Approx. 12m 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) | | 13.60 to 13.80V Temperature compensation: -18mV/°C |
| Cyclic charging voltage(25°C) | | 14.50 to 15.00V Temperature compensation: -30mV/°C |
| Maximum charging current | | 6A |
| Maximum discharge current | | 300A(5 sec.) |
| Designed floating life(20°C) | | 5 years |

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 | 5min | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 10h | 20h |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V | 78.3 | 49.6 | 38.7 | 21.8 | 13.4 | 7.35 | 5.08 | 4.20 | 3.58 | 1.94 | 1.04 |
| 9.90V | 76.0 | 48.1 | 37.8 | 21.4 | 13.2 | 7.30 | 5.05 | 4.18 | 3.55 | 1.93 | 1.04 |
| 10.2V | 72.8 | 46.1 | 36.4 | 20.7 | 12.9 | 7.24 | 5.02 | 4.15 | 3.53 | 1.92 | 1.03 |
| 10.5V | 69.7 | 44.2 | 35.2 | 20.2 | 12.6 | 7.13 | 4.98 | 4.12 | 3.51 | 1.91 | 1.03 |
| 10.8V | 65.8 | 41.7 | 33.3 | 19.5 | 12.2 | 6.95 | 4.83 | 4.00 | 3.40 | 1.87 | 1.00 |

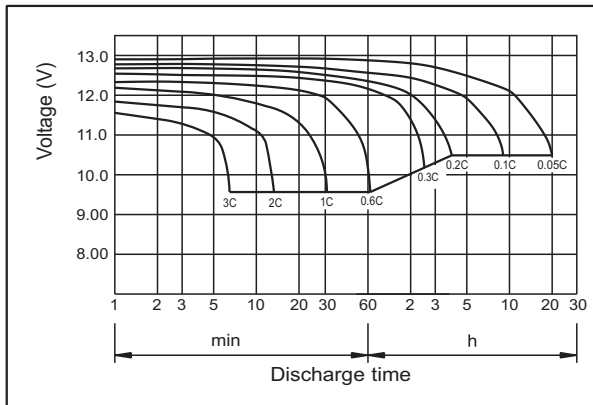
Constant Power Discharge Characteristics Unit:W(25°C,77°F)

| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 10h | 20h |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V | 874 | 560 | 442 | 250 | 155 | 85.9 | 60.4 | 50.1 | 42.7 | 23.3 | 12.5 |
| 9.90V | 848 | 543 | 431 | 245 | 153 | 85.4 | 60.0 | 49.8 | 42.4 | 23.2 | 12.4 |
| 10.2V | 813 | 520 | 415 | 238 | 149 | 84.7 | 59.6 | 49.4 | 42.1 | 23.1 | 12.4 |
| 10.5V | 778 | 498 | 401 | 232 | 146 | 83.4 | 59.2 | 49.1 | 41.9 | 23.0 | 12.3 |
| 10.8V | 734 | 470 | 380 | 223 | 142 | 81.3 | 57.4 | 47.6 | 40.6 | 22.5 | 12.1 |

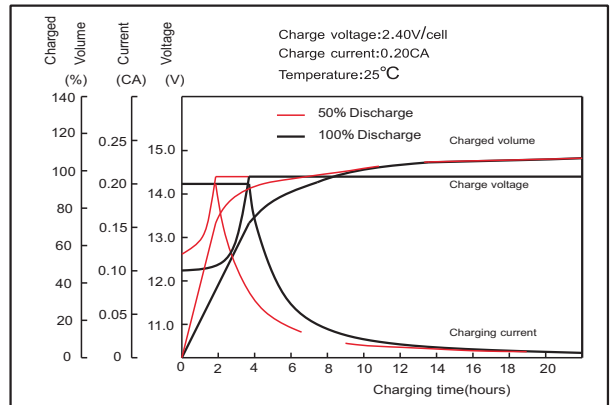
Note: The above characteristics data can be obtained within three charge or discharge cycles.

NP12-20Ah 12V20Ah

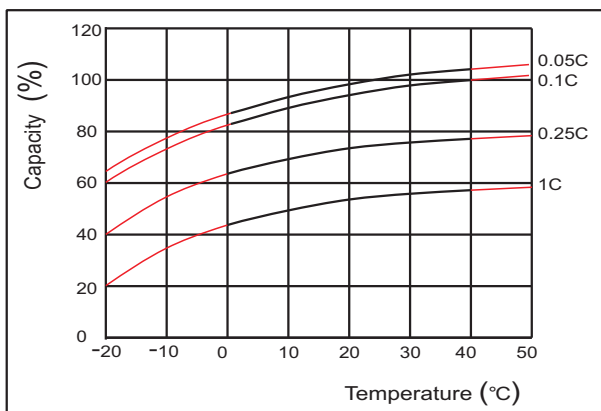
● **Discharge characteristics(25°C)**



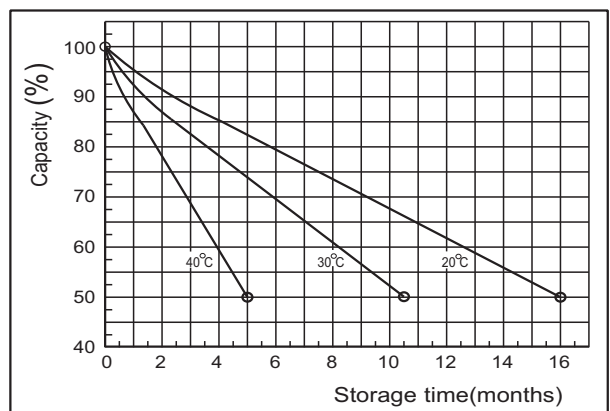
● **Charging characteristics (25°C)**



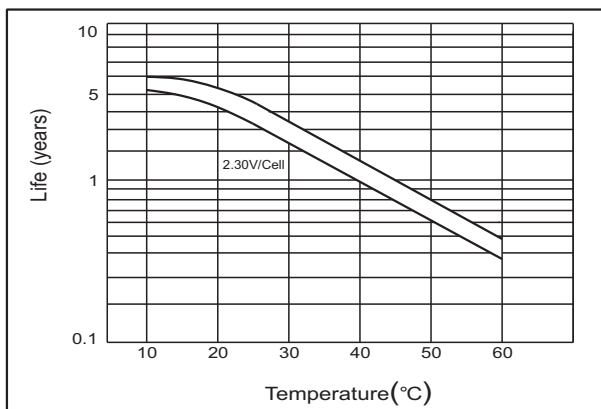
● **Effect of temperature on capacity**



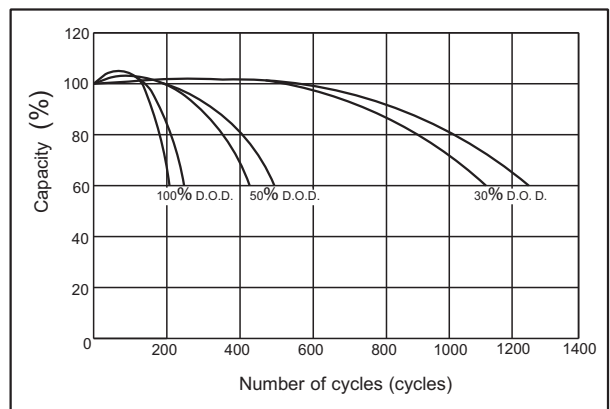
● **Self-discharge characteristics**



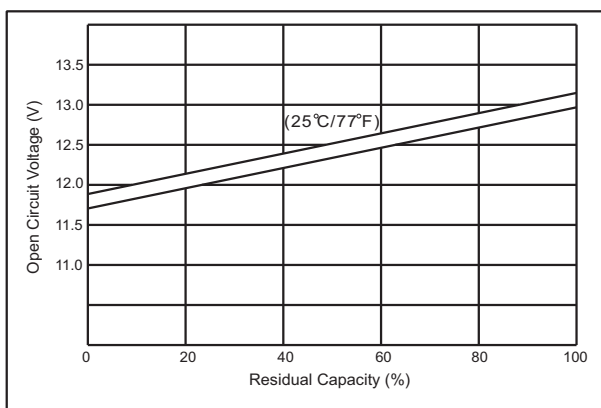
● **Floating life on temperature**



● **Cycle life on D.O.D (25°C)**



● **The relationship for OCV and residual capacity (25°C)**



● **The relationship for charging voltage and temperature**

