

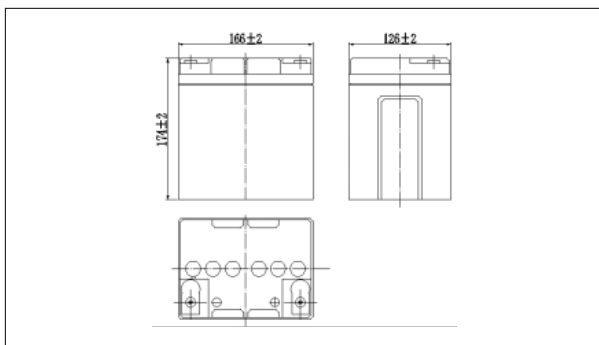
NP12-28Ah 12V28Ah

● Specifications

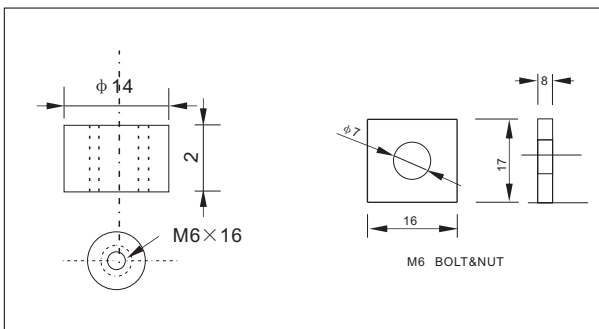
| | | |
|-------------------------------|--------------|---|
| Nominal Voltage | | 12V |
| Rated capacity (20 hour rate) | | 28Ah |
| Dimensions | Length | 166±2mm(6.54inch) |
| | Width | 126±2mm(4.96inch) |
| | Height | 174±1mm(6.85inch) |
| | Total Height | T14:174±2mm(6.85inch) T5:181±2mm(7.13inch) |
| Approx. Weight | | 8.8kg(19.4lbs)±4% |



● Outer dimensions (mm)



● Terminal Type (mm)



● Characteristics

| | | |
|---|-------------|---|
| Capacity (25°C) | 20HR(10.5V) | 28Ah |
| | 10HR(10.5V) | 26Ah |
| | 1HR(9.60V) | 17Ah |
| Terminal type | | T14/T5 |
| 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) | 3month | Remaining Capacity:91% |
| | 6month | Remaining Capacity:82% |
| | 12month | 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) | | 14.50 to 15.00V Temperature compensation: -30mV/°C |
| Maximum charging current | | 8.4A |
| Maximum discharge current | | 360A(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 / lead |

● 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 | 105 | 66.4 | 51.9 | 29.2 | 18.0 | 10.0 | 6.94 | 5.74 | 4.88 | 2.65 | 1.42 |
| 9.90V | 102 | 64.4 | 51.6 | 28.6 | 17.7 | 9.97 | 6.90 | 5.71 | 4.86 | 2.64 | 1.42 |
| 10.2V | 97.5 | 61.8 | 48.7 | 27.6 | 17.3 | 9.88 | 6.85 | 5.67 | 4.82 | 2.63 | 1.41 |
| 10.5V | 93.3 | 59.1 | 47.1 | 27.1 | 16.9 | 9.74 | 6.80 | 5.63 | 4.79 | 2.61 | 1.40 |
| 10.8V | 88.0 | 55.8 | 44.6 | 26.1 | 16.4 | 9.49 | 6.60 | 5.46 | 4.64 | 2.56 | 1.37 |

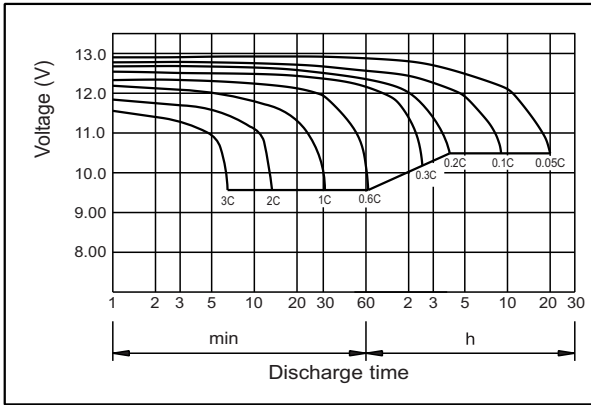
● Constant Power Discharge Characteristics Unit:W(25°C,77°F)

| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 10h | 20h |
|----------|------|-------|-------|-------|-------|-----|------|------|------|------|------|
| 9.60V | 1170 | 749 | 591 | 335 | 208 | 117 | 82.4 | 68.4 | 58.3 | 31.8 | 17.1 |
| 9.90V | 1135 | 727 | 577 | 328 | 205 | 117 | 82.0 | 68.0 | 58.0 | 31.7 | 17.0 |
| 10.2V | 1088 | 697 | 556 | 318 | 200 | 116 | 81.4 | 67.5 | 57.6 | 31.5 | 16.9 |
| 10.5V | 1041 | 667 | 537 | 310 | 196 | 114 | 80.8 | 67.0 | 57.2 | 31.3 | 16.8 |
| 10.8V | 983 | 629 | 508 | 299 | 190 | 111 | 78.4 | 65.0 | 55.5 | 31.7 | 16.5 |

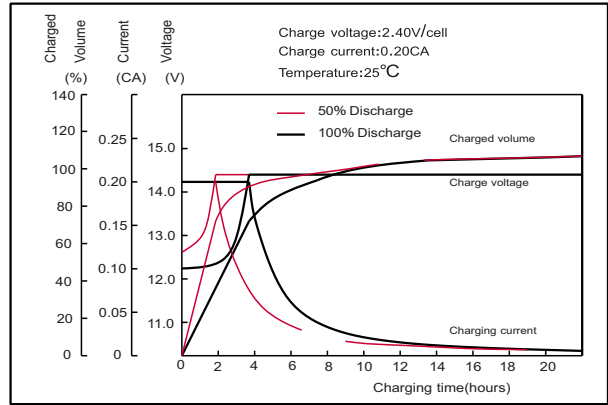
Note: The above characteristics data can be obtained within three charge or discharge cycles.

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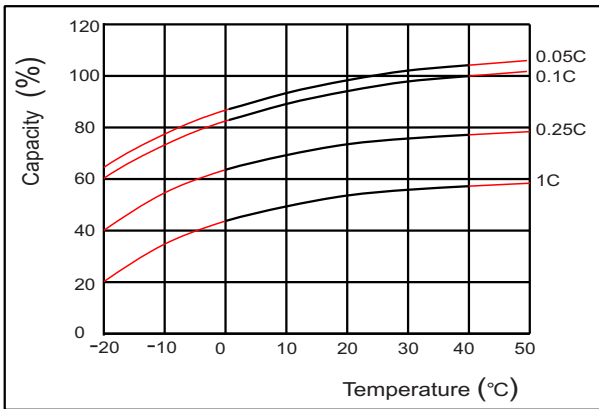
Discharge characteristics(25°C)



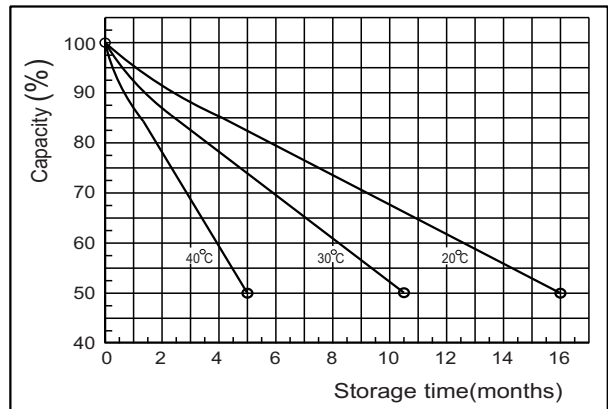
Charging characteristics



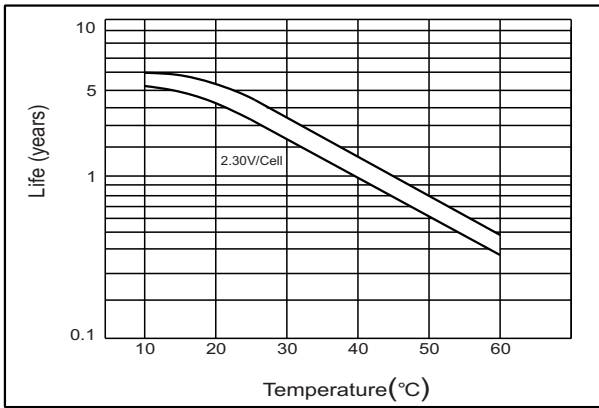
Temperature effects on Capacity



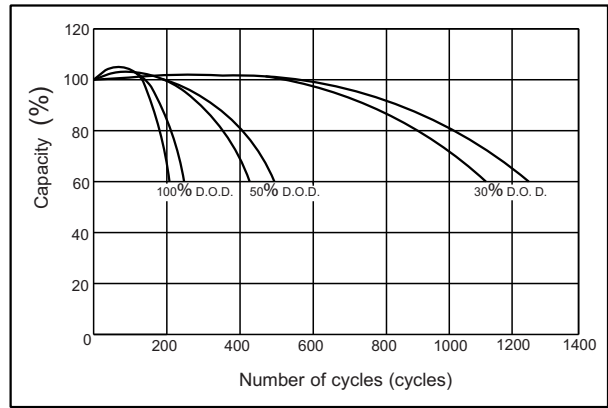
Self-discharge characteristics



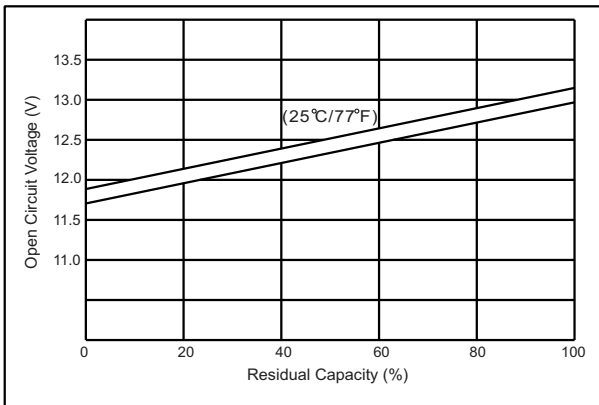
Temperature effects on float life



Cycle service life in relation to depth of discharge



The relationship for OCV and Capacity (25°C)



The relationship for Charging voltage and Temperature

