

NP12-1.2Ah 12V1.2Ah

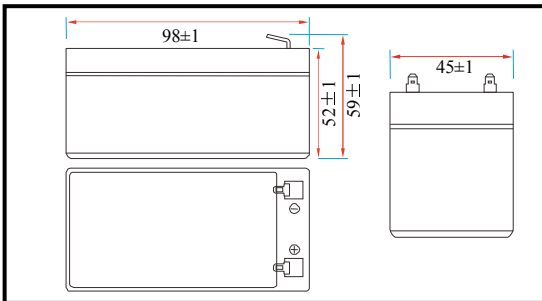
Valve Regulated Lead Acid Battery



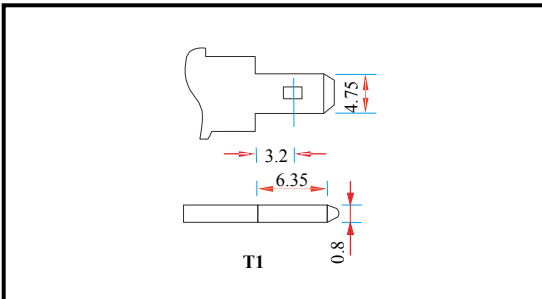
Specifications

| | | |
|-----------------------|------------------------|-------------------|
| Nominal voltage | 12V (6 cells per unit) | |
| Rated capacity (20HR) | 1.2Ah/10.5V | |
| Dimensions | Length | 98±1mm (3.86inch) |
| | Width | 43±1mm (1.69inch) |
| | Height | 52±1mm (2.05inch) |
| | Total height | 58±1mm (2.28inch) |
| Approx. weight | 0.54kg (1.19lbs)±5% | |

Outer dimensions (mm)



Terminal type (mm)



Characteristics

| | | |
|---|---|--|
| Capacity (25°C) | 20HR (10.5V) | 1.2Ah |
| | 10HR (10.5V) | 1.1Ah |
| | 1HR (9.60V) | 0.72Ah |
| Terminal type | | T1 |
| Internal resistance (Fully charged, 25°C) | | Approx. 90mΩ |
| 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) | | 13.60 to 13.80V Temperature compensation: -18mV/°C/Block |
| Cyclic charging voltage (25°C) | | 14.50 to 15.00V Temperature compensation: -30mV/°C/Block |
| Maximum charging current | | 0.36A |
| Maximum discharge current | | 18A (5 sec.) |
| Short circuit current | | 51A |
| Design life | 5 years for floating (25°C) | |
| | Eurobat (20°C): 3-5 years, standard commercial. | |

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)

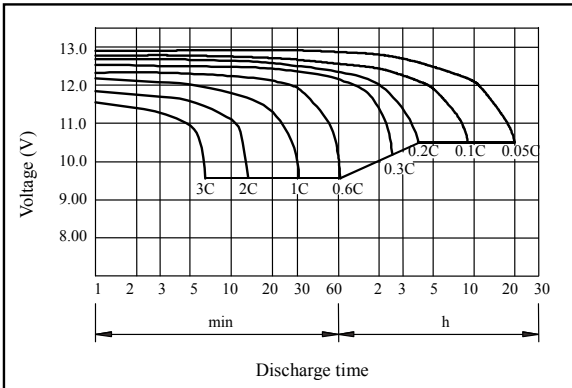
| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 10h | 20h |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V | 4.58 | 2.90 | 2.27 | 1.28 | 0.79 | 0.43 | 0.30 | 0.25 | 0.21 | 0.11 | 0.06 |
| 9.90V | 4.45 | 2.82 | 2.21 | 1.25 | 0.77 | 0.43 | 0.30 | 0.24 | 0.21 | 0.11 | 0.06 |
| 10.2V | 4.26 | 2.70 | 2.13 | 1.21 | 0.75 | 0.42 | 0.29 | 0.24 | 0.21 | 0.11 | 0.06 |
| 10.5V | 4.08 | 2.58 | 2.06 | 1.18 | 0.74 | 0.42 | 0.29 | 0.24 | 0.21 | 0.11 | 0.06 |
| 10.8V | 3.85 | 2.44 | 1.95 | 1.14 | 0.72 | 0.41 | 0.28 | 0.23 | 0.20 | 0.11 | 0.06 |

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

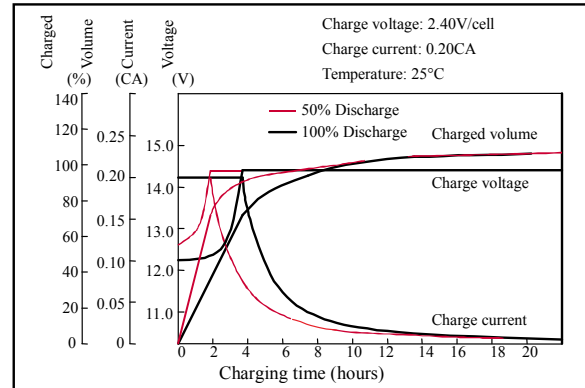
| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 10h | 20h |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 9.60V | 51.2 | 32.8 | 25.9 | 14.6 | 9.10 | 5.03 | 3.53 | 2.93 | 2.50 | 1.36 | 0.73 |
| 9.90V | 49.6 | 31.8 | 25.2 | 14.4 | 8.97 | 5.00 | 3.51 | 2.91 | 2.48 | 1.36 | 0.73 |
| 10.2V | 47.6 | 30.5 | 24.3 | 13.9 | 8.74 | 4.96 | 3.49 | 2.89 | 2.47 | 1.35 | 0.72 |
| 10.5V | 45.5 | 29.2 | 23.5 | 13.6 | 8.56 | 4.88 | 3.46 | 2.87 | 2.45 | 1.34 | 0.72 |
| 10.8V | 43.0 | 27.5 | 22.2 | 13.1 | 8.30 | 4.76 | 3.36 | 2.79 | 2.38 | 1.32 | 0.71 |

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

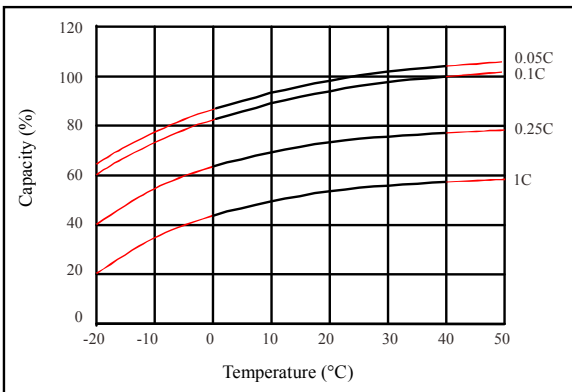
● Discharge characteristics (25°C)



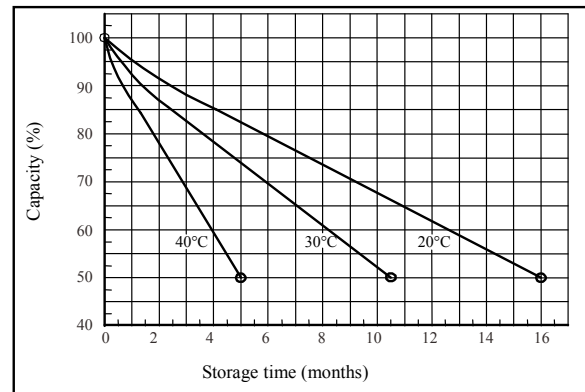
● Charging characteristics (25°C)



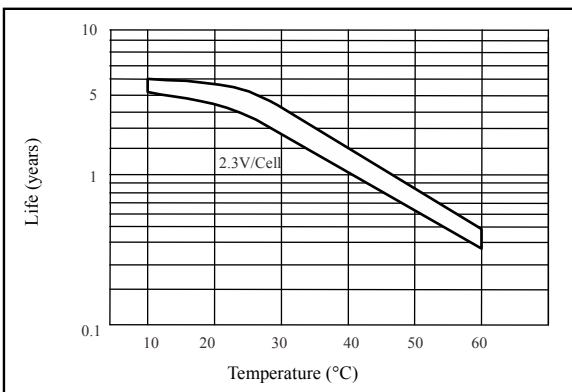
● Temperature effects on capacity



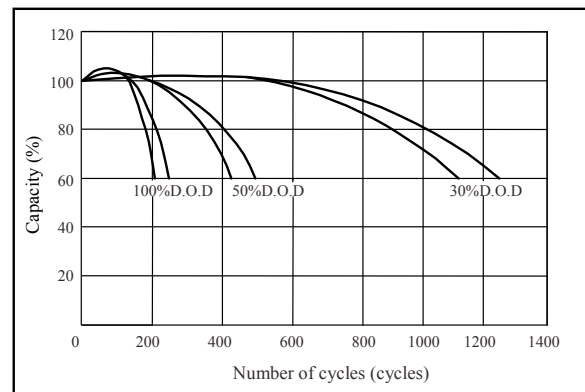
● Self-discharge characteristics



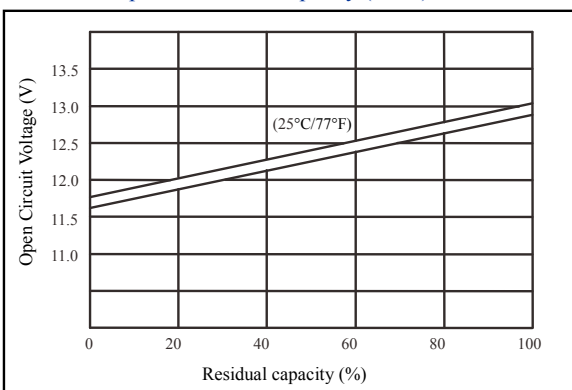
● Floating life on temperature



● Cycle life on D.O.D (25°C)



● Relationship for OCV and capacity (25°C)



● Relationship for charging voltage and temperature

