

NEWSTAR

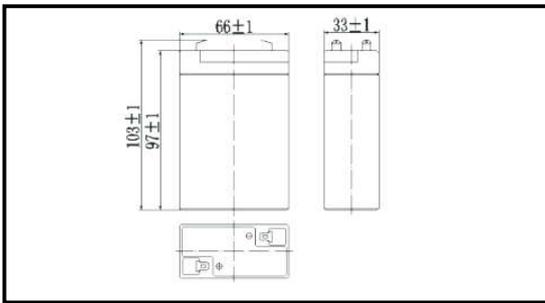
NP6-2.8Ah 6V2.8Ah

Valve Regulated Lead Acid Battery

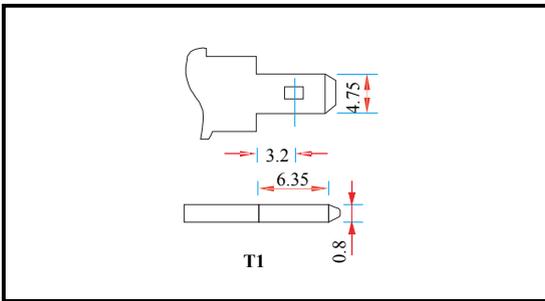
● Specifications

| | | |
|-----------------------|-----------------------|--------------------|
| Nominal voltage | 6V (3 cells per unit) | |
| Rated capacity (20HR) | 2.8Ah/5.25V | |
| Dimensions | Length | 66±1mm (2.60inch) |
| | Width | 33±1mm (1.30inch) |
| | Height | 97±1mm (3.82inch) |
| | Total height | 103±1mm (4.06inch) |
| Approx. weight | 0.48kg (1.06lbs)±5% | |

● Outer dimensions (mm)



● Terminal type (mm)



● Characteristics

| | | |
|---|---|--|
| Capacity (25°C) | 20HR (5.25V) | 2.8Ah |
| | 10HR (5.25V) | 2.6Ah |
| | 1HR (4.80V) | 1.8Ah |
| Terminal type | | T1 |
| Internal resistance (Fully charged, 25°C) | | Approx. 27mΩ |
| 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) | | 6.80 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 | | 0.84A |
| Maximum discharge current | | 42A (5 sec.) |
| 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 |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 4.80V | 10.7 | 6.78 | 5.29 | 2.98 | 1.83 | 1.00 | 0.69 | 0.57 | 0.49 | 0.27 | 0.14 |
| 4.95V | 10.4 | 6.57 | 5.16 | 2.92 | 1.81 | 1.00 | 0.69 | 0.57 | 0.49 | 0.26 | 0.14 |
| 5.10V | 9.95 | 6.30 | 4.97 | 2.83 | 1.76 | 0.99 | 0.69 | 0.57 | 0.48 | 0.26 | 0.14 |
| 5.25V | 9.52 | 6.03 | 4.81 | 2.76 | 1.73 | 0.97 | 0.68 | 0.56 | 0.48 | 0.26 | 0.14 |
| 5.40V | 8.98 | 5.69 | 4.55 | 2.66 | 1.67 | 0.95 | 0.66 | 0.55 | 0.46 | 0.26 | 0.14 |

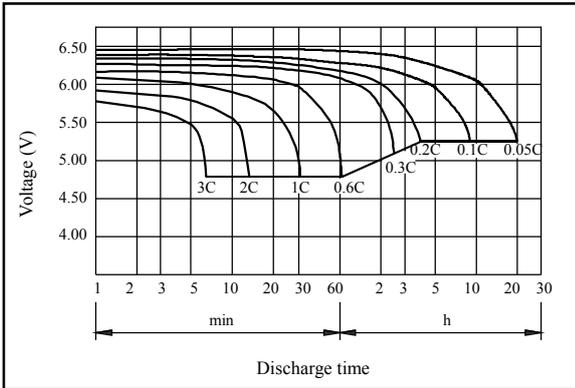
● Constant power discharge characteristics unit: Watt/Block (at 25°C, 77°F)

| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 10h | 20h |
|----------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 4.80V | 59.7 | 38.2 | 30.2 | 17.1 | 10.6 | 5.87 | 4.12 | 3.42 | 2.92 | 1.59 | 0.85 |
| 4.95V | 57.9 | 37.1 | 29.4 | 16.7 | 10.5 | 5.83 | 4.10 | 3.40 | 2.90 | 1.58 | 0.85 |
| 5.10V | 55.5 | 35.5 | 28.4 | 16.2 | 10.2 | 5.78 | 4.07 | 3.37 | 2.88 | 1.58 | 0.85 |
| 5.25V | 53.1 | 34.0 | 27.4 | 15.8 | 10.0 | 5.70 | 4.04 | 3.35 | 2.86 | 1.57 | 0.84 |
| 5.40V | 50.1 | 32.1 | 25.9 | 15.3 | 9.68 | 5.55 | 3.92 | 3.25 | 2.77 | 1.54 | 0.82 |

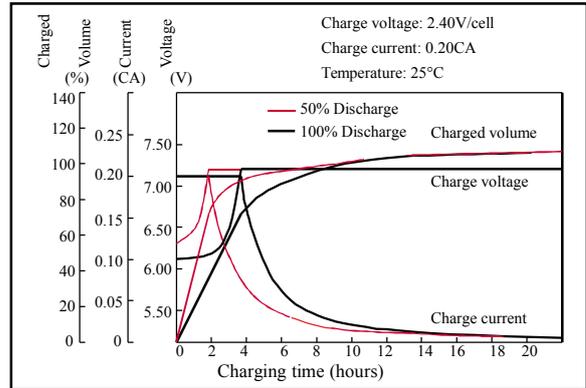
Note 1: Above characteristics data can be obtained within three charge and discharge cycles.

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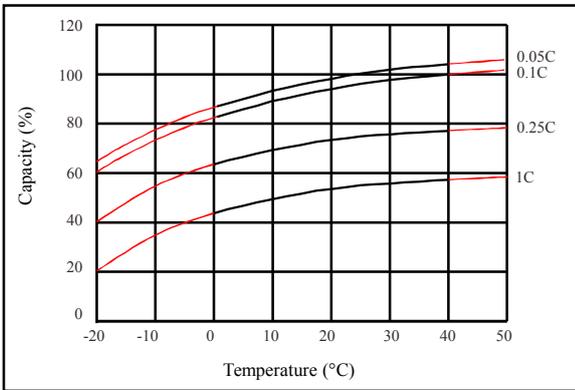
● Discharge characteristics (25°C)



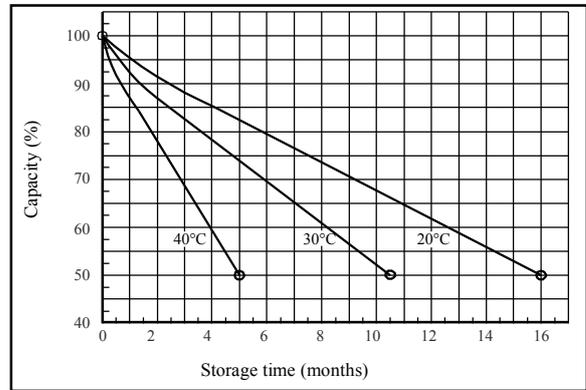
● Charging characteristics (25°C)



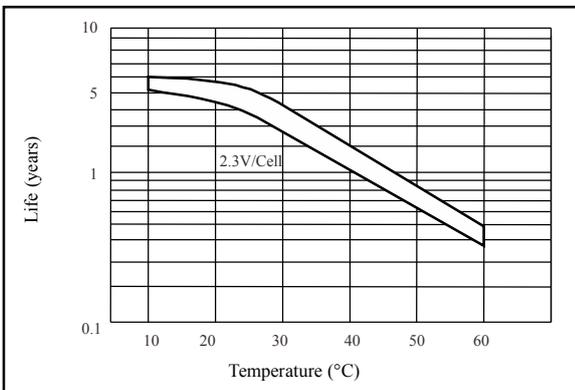
● Temperature effects on capacity



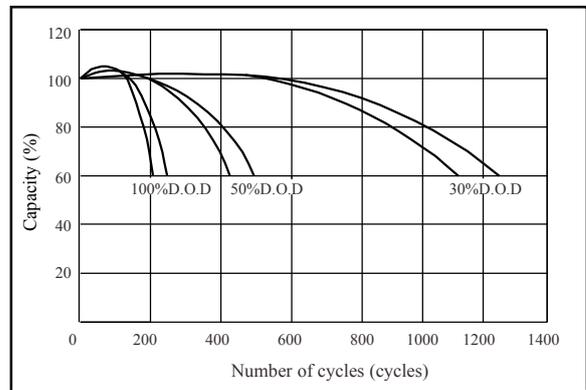
● Self-discharge characteristics



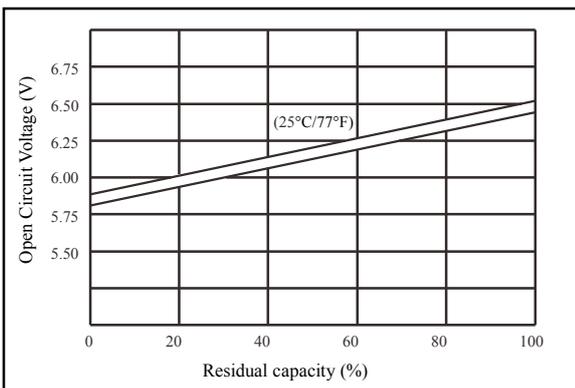
● Floating life on temperature



● Cycle life on D.O.D (25°C)



● Relationship for OCV and capacity (25°C)



● Relationship for charging voltage and temperature

