

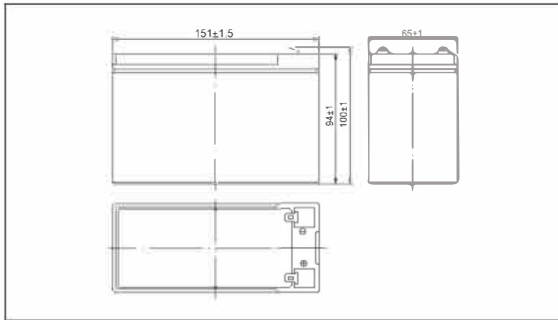
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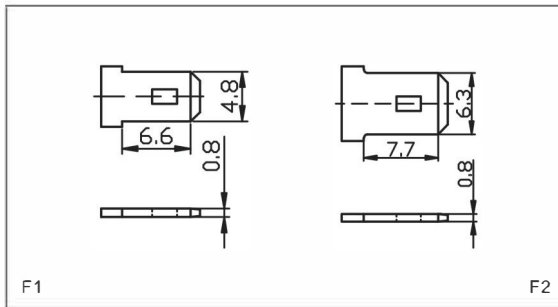
► Specifications

| | | |
|-------------------------------|--------------|-----------------------|
| Nominal Voltage | | 12V |
| Rated capacity (20 hour rate) | | 9Ah |
| Dimensions | Length | 151± 1.5mm (5.94inch) |
| | Width | 65 ± 1mm(2.56inch) |
| | Height | 94 ± 1mm(3.70inch) |
| | Total Height | 100± 1mm(3.94inch) |
| Approx. Weight | | 2.53kg(5.30lbs)± 4% |

► Outer Dimensions (mm)



► Terminal Type (mm)



► Characteristics

| | | |
|---|-------------|---|
| Capacity (25°C) | 20HR(10.5V) | 9Ah |
| | 10HR(10.5V) | 8.3Ah |
| | 1HR(9.60V) | 5.8Ah |
| Terminal type | | F1/F2 |
| Internal resistance (Fully charged, 25°C) | | Approx. 18m 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) | | 14.50 to 15.00V Temperature compensation: -30mV/°C |
| Maximum charging current | | 2.7A |
| Maximum discharge current | | 140A(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)

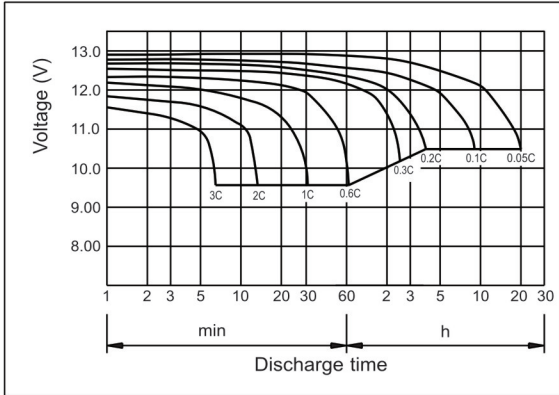
| F.V/Time | 5min | 10min | 15min | 30min | 1HR | 2HR | 3HR | 5HR | 8HR | 10HR | 20HR |
|----------|------|-------|-------|-------|------|------|------|------|------|------|------|
| 9.60V | 38.2 | 23.8 | 18.2 | 10.3 | 5.81 | 3.26 | 2.35 | 1.51 | 1.00 | 0.85 | 0.46 |
| 9.90V | 35.8 | 23.2 | 17.5 | 10.1 | 5.73 | 3.20 | 2.33 | 1.50 | 0.99 | 0.84 | 0.45 |
| 10.2V | 34.6 | 22.7 | 17.1 | 10.0 | 5.69 | 3.17 | 2.32 | 1.49 | 0.99 | 0.83 | 0.45 |
| 10.5V | 33.2 | 21.6 | 16.6 | 9.7 | 5.56 | 3.12 | 2.28 | 1.48 | 0.98 | 0.83 | 0.45 |
| 10.8V | 31.3 | 20.3 | 16.1 | 9.5 | 5.47 | 3.07 | 2.25 | 1.46 | 0.97 | 0.82 | 0.43 |

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

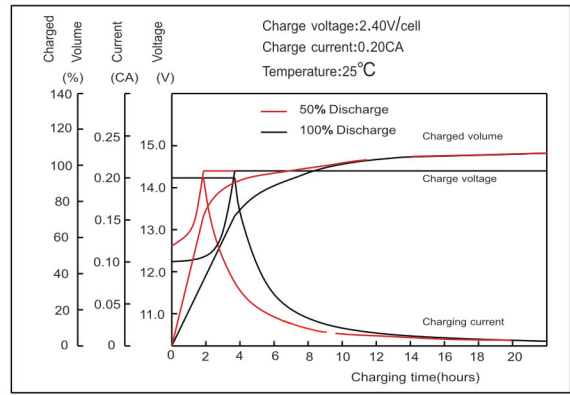
| F.V/Time | 5min | 10min | 15min | 30min | 1HR | 2HR | 3HR | 5HR | 8HR | 10HR | 20HR |
|----------|-------|-------|-------|-------|------|------|------|-------|-------|------|------|
| 9.60V | 412.6 | 259.4 | 200.2 | 115.4 | 66.3 | 37.5 | 27.3 | 17.70 | 11.82 | 9.56 | 5.37 |
| 9.90V | 393.8 | 257.5 | 196.0 | 114.1 | 65.3 | 36.8 | 27.0 | 17.60 | 11.70 | 9.90 | 5.40 |
| 10.2V | 380.6 | 252.0 | 191.5 | 113.0 | 64.9 | 36.5 | 26.9 | 17.47 | 11.71 | 9.44 | 5.24 |
| 10.5V | 368.5 | 241.9 | 187.6 | 110.6 | 63.9 | 36.5 | 26.7 | 17.50 | 11.69 | 9.40 | 5.12 |
| 10.8V | 350.6 | 229.4 | 183.5 | 109.3 | 62.9 | 35.9 | 26.3 | 17.26 | 11.54 | 9.28 | 5.12 |

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

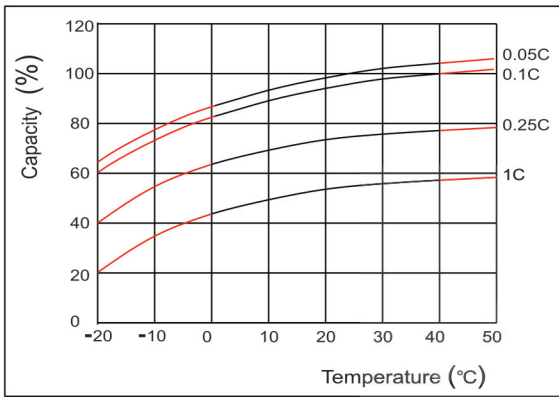
► Discharge Characteristics (25°C)



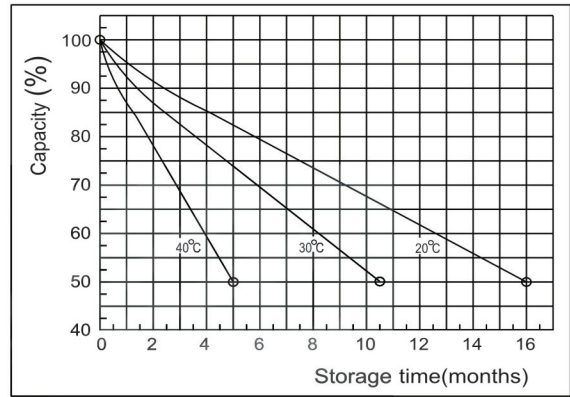
► Charging Characteristics (25°C)



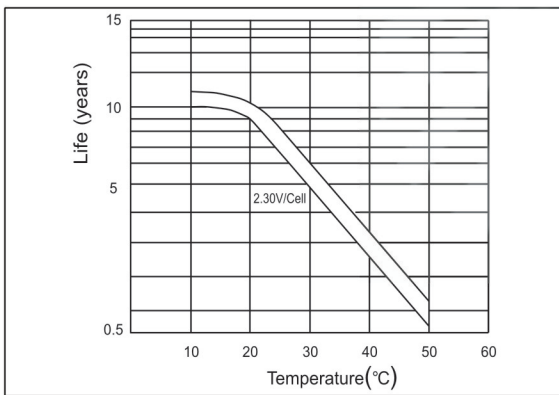
► Temperature effects on Capacity



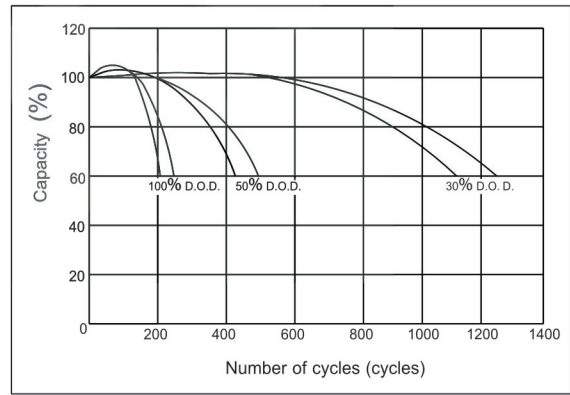
► Self-Discharge Characteristics



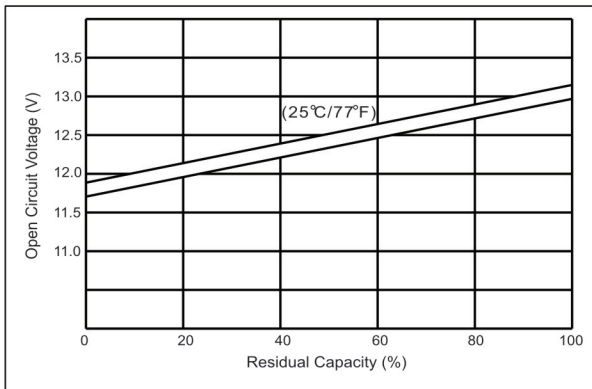
► Floating Life on Temperature



► Cycle Life on D.O.D (25°C)



► The Relationship for OCV and Capacity (25°C)



► The Relationship for Charging Voltage and Temperature

