

Valve Regulated GEL Battery

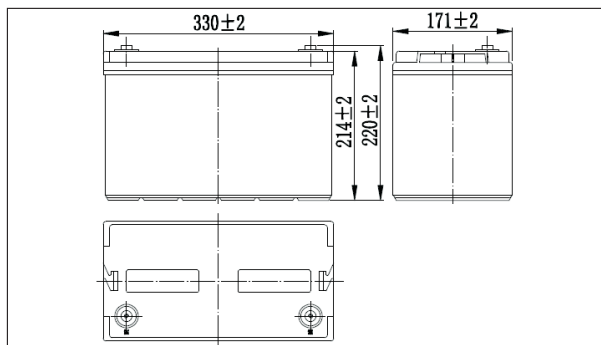
GPG110-12 12V 110AH

Specifications

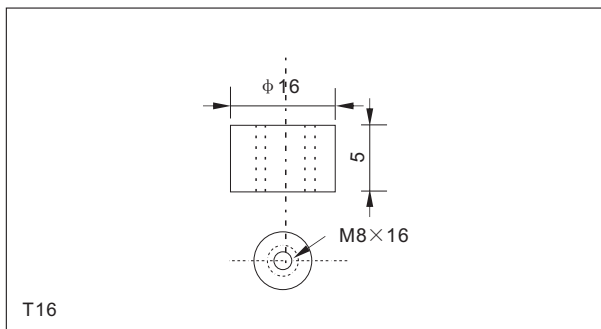
| | | |
|-------------------------------|--------------------|--------------------|
| Nominal Voltage | 12V | |
| Rated capacity (10 hour rate) | 110Ah | |
| Dimensions | Length | 330±2mm(12.99inch) |
| | Width | 171±2mm(6.73inch) |
| | Height | 214±2mm(8.43inch) |
| | Total Height | 220±2mm(8.66inch) |
| Approx. Weight | 30.5kg(67.2lbs)±3% | |



Outer dimensions (mm)



Terminal Type (mm)



Characteristics

| | | |
|---|-------------|---|
| Capacity (25°C) | 10HR(10.8V) | 110Ah |
| | 3HR(10.8V) | 81Ah |
| | 1HR(10.5V) | 60.3Ah |
| Terminal type | | T16 |
| Internal resistance (Fully charged, 25°C) | | Approx. 5m 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) | | 14.40 to 14.70V Temperature compensation: -30mV/°C |
| Maximum charging current | | 20A |
| Maximum discharge current | | 800A (5 sec.) |
| Designed floating life (20°C) | | 12 years |

Construction

| Component | Positive plate | Negative plate | Container | Cover | Separator | Electrolyte | Safety valve | Terminal |
|--------------|----------------|----------------|-----------|-------|-----------|-------------|--------------|----------|
| Raw material | Lead dioxide | Lead | ABS | ABS | AGM | Gel | Rubber | Copper |

Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

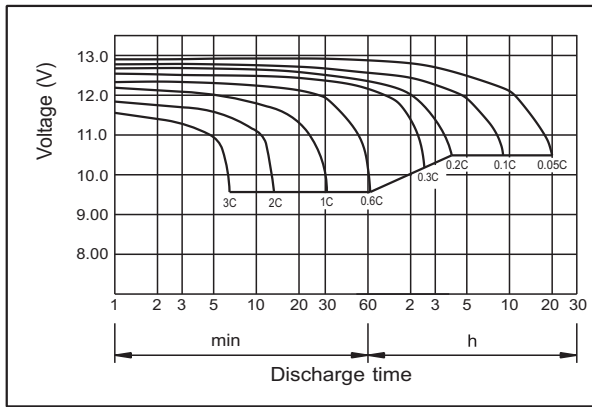
| F.V/Time | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|----------|-------|-------|-------|-------|------|------|------|------|------|------|-----|
| 9.60V | 210.6 | 172.8 | 104.8 | 64.8 | 39.4 | 28.1 | 22 | 18.7 | 13.2 | 11.4 | 6.1 |
| 9.90V | 204.1 | 168.5 | 102.7 | 63.8 | 39.2 | 28 | 21.9 | 18.6 | 13.2 | 11.3 | 6 |
| 10.2V | 195.5 | 162 | 99.6 | 62.2 | 38.9 | 27.8 | 21.7 | 18.5 | 13.1 | 11.2 | 5.9 |
| 10.5V | 187.9 | 156.6 | 97.1 | 60.3 | 38.3 | 27.5 | 21.6 | 18.4 | 13 | 11.1 | 5.8 |
| 10.8V | 177.1 | 149 | 93.5 | 58.3 | 37.4 | 27 | 21 | 17.8 | 12.5 | 11 | 5.7 |

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

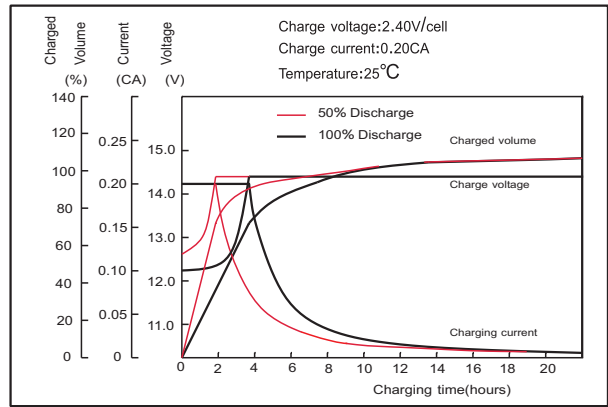
| F.V/Time | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|----------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|------|
| 9.60V | 2274.5 | 1897.6 | 1175 | 738.7 | 456.8 | 330.5 | 259.2 | 221.4 | 156.6 | 131.8 | 69.9 |
| 9.90V | 2206.4 | 1852.2 | 1152.4 | 727.9 | 454.7 | 328.3 | 257 | 220.3 | 156.6 | 130.7 | 69.8 |
| 10.2V | 2115.7 | 1783.1 | 1116.7 | 709.6 | 450.4 | 326.2 | 256 | 218.2 | 155.5 | 130.7 | 69.6 |
| 10.5V | 2023.9 | 1722.6 | 1089.7 | 686.9 | 443.9 | 324 | 253.8 | 217.1 | 154.4 | 129.6 | 69.1 |
| 10.8V | 1910.5 | 1631.9 | 1049.8 | 665.3 | 432 | 317.5 | 246.2 | 210.6 | 149 | 128.5 | 68.7 |

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

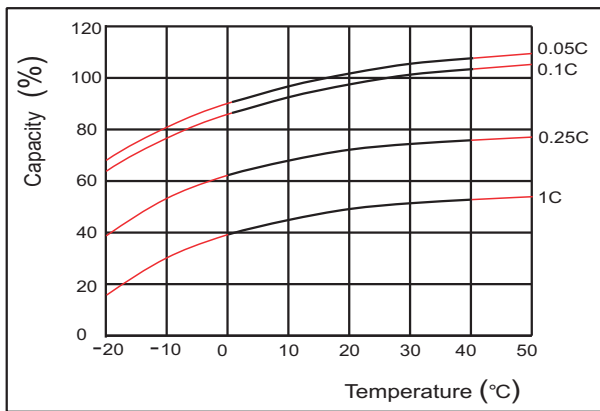
● Discharge characteristics(25°C)



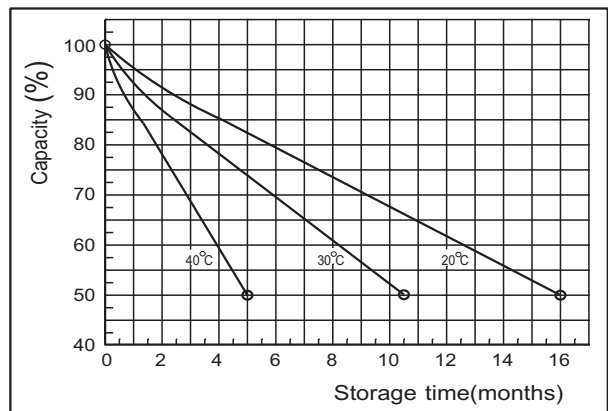
● Charging characteristics (25°C)



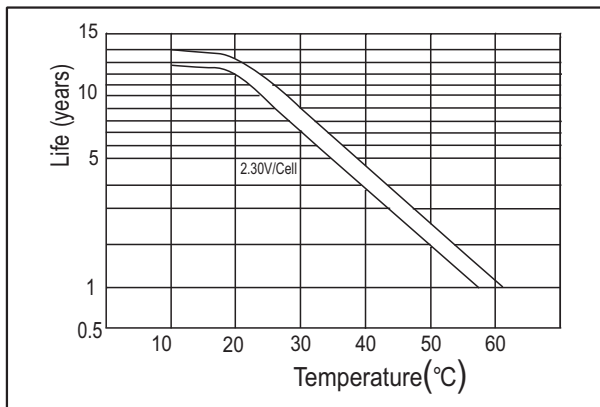
● Temperature effects on Capacity



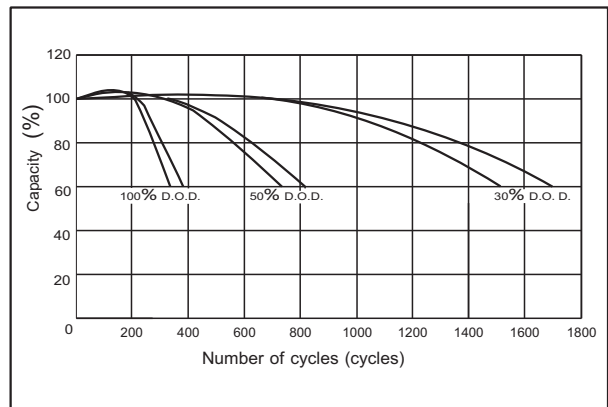
● Self-discharge characteristics



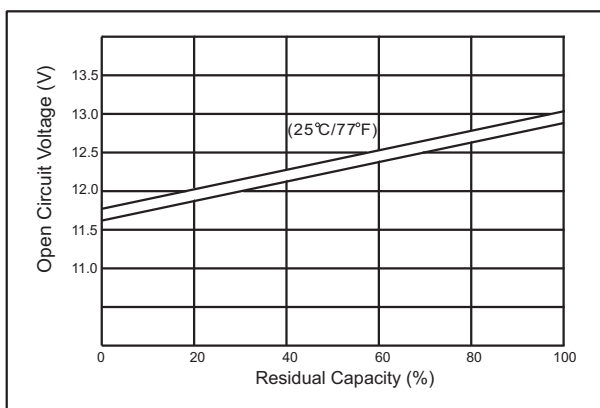
● Floating life on Temperature



● Cycle life on D.O.D (25°C)



● The relationship for OCV and Capacity (25°C)



● The relationship for Charging voltage and Temperature

