

General features for MPE Series (Deep-cycle) battery

- * Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- * Computer designed lead, calcium tin alloy grid for high power density.
- * UL-recognized component.
- * Long service life, float or cyclic applications.
- * Maintenance-free operation.
- * Low self discharge.
- * Case and cover are available in both standard and flame retardant ABS (Standard :UL94V0).



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MPE12-230 (12V230Ah)

Specifications

| | | | |
|-------------------------------|--------------|-----------------------|---------------------|
| Nominal Voltage | | 12V | |
| Rated capacity (10 hour rate) | | 230 Ah | |
| Dimensions (±2mm) | Total Height | T12 | 241 mm (9.45inches) |
| | | T19 | 225 mm (8.82inches) |
| | Height | 220 mm (8.66 inches) | |
| | Length | 520 mm (20.55 inches) | |
| | Width | 268 mm (10.55 inches) | |
| Weight Approx (±3%) | | 66.0 Kg (145.5lbs) | |

Battery picture and construction

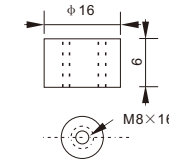


Battery Construction

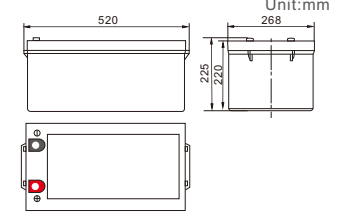
| | | | | |
|--------------|----------------------|----------------|--------------|----------|
| Component | Positive plate | Negative plate | Container | Cover |
| Raw material | Lead dioxide | Lead | ABS | ABS |
| Component | Electrolyte | Separator | Safety valve | Terminal |
| Raw material | Dilute sulfuric acid | Fiberglass | Rubber | Copper |

Outer dimension and terminal

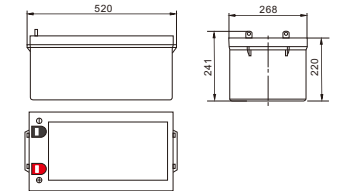
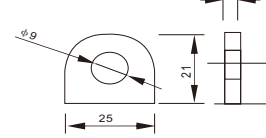
Terminal:T19



Outer dimensions(±2mm)



Terminal:T12



Characteristics

| | | |
|---|---|--|
| Capacity 25°C(77°F) | 10 hour rate(23 A,10.8V) 5 hour rate(36.8A,10.5V) 1 hour rate(138 A,9.6V) | 230Ah 184Ah 138Ah |
| Internal Resistance | Full charged battery at 25°C(77°F) | Approx 2.3mΩ |
| Capacity affected by Temperature (10hour rate) | 40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F) | 102% 100% 85% 65% |
| Remaining capacity Self-Discharge At 25°C(77°F) | Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage | 91% 82% 64% |
| Terminal type | T19 (Option T12) | |
| Max. Discharge current 25°C/(77°F) | 1800A (5Seconds) | |
| Nominal operating temperature | 25°C ±5°C(77°F ±9°F) | |
| Operating Temperature Range | Discharge Charge Storage | -15°C ~50°C (5°F ~122°F) -10°C ~50°C (14°F ~122°F) -20°C ~50°C (-4°F ~122°F) |
| Charge methods (constant Voltage) At 25°C(77°F) | Cycle use Standby use | Initial Charging Current less than 57.5A Voltage 14.5-15.0V Temperature compensation:-30mV/°C Voltage 13.5-13.8V Temperature compensation:-18mV/°C |

Constant current discharge (25°C , 77 °F)

Constant power discharge (25°C , 77 °F)

Unit:A

Unit:watts

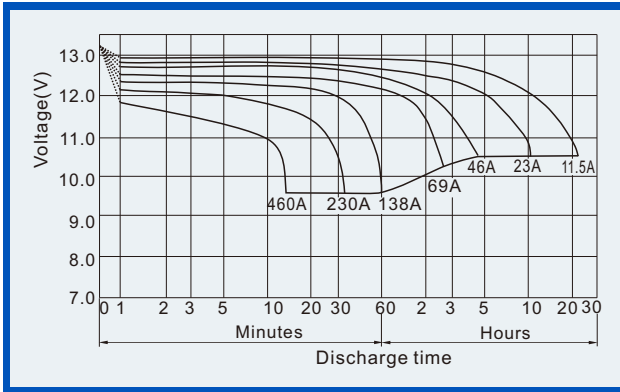
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

| Time | | 5min | 10min | 15min | 30min | 1h | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|--------|---|-------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|
| | | 9.60V | A | 737 | 485 | 391 | 262.2 | 138.0 | 80.5 | 59.1 | 46.0 | 38.0 | 26.91 |
| | W | 7603 | 5183 | 4195 | 2819 | 1490 | 884 | 658 | 518 | 431 | 308 | 279 | 151.6 |
| 10.20V | A | 713 | 438 | 368 | 250.7 | 129.7 | 76.8 | 57.5 | 44.9 | 37.3 | 26.22 | 23.69 | 12.65 |
| | W | 7620 | 4890 | 4123 | 2814 | 1467 | 885 | 666 | 522 | 434 | 307 | 278 | 148.4 |
| 10.50V | A | 690 | 392 | 322 | 234.6 | 125.6 | 75.0 | 56.1 | 44.2 | 36.8 | 25.99 | 23.23 | 12.65 |
| | W | 7537 | 4456 | 3677 | 2700 | 1454 | 870 | 654 | 517 | 431 | 306 | 275 | 149.5 |
| 10.80V | A | 665 | 369 | 299 | 216.2 | 121.4 | 73.1 | 54.7 | 43.5 | 35.9 | 25.30 | 23.00 | 12.42 |
| | W | 7463 | 4257 | 3450 | 2505 | 1414 | 857 | 645 | 513 | 424 | 300 | 273 | 147.9 |
| 11.10V | A | 643 | 346 | 276 | 193.2 | 117.3 | 71.3 | 52.9 | 42.3 | 35.0 | 24.61 | 21.85 | 11.73 |
| | W | 7290 | 4006 | 3218 | 2260 | 1379 | 843 | 628 | 504 | 417 | 295 | 263.8 | 142.2 |

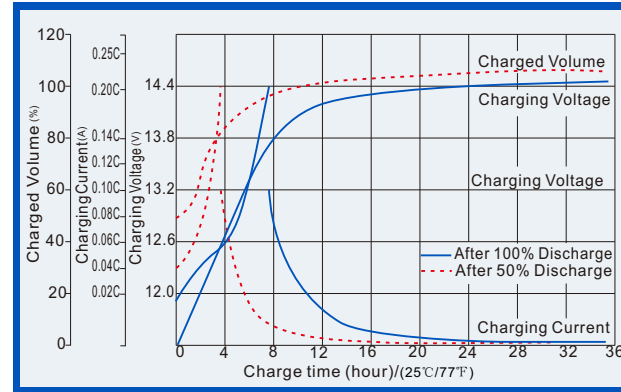
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

Deep Cycle Battery (VRLA Battery, AGM technology) Maintenance-free Sealed Lead Acid Rechargeable Battery

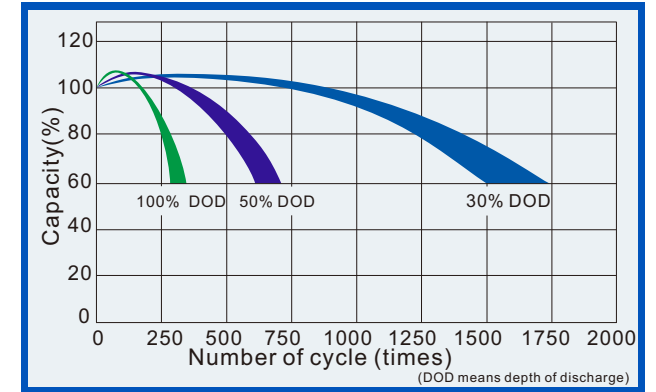
Discharge characteristics (25°C, 77°F)



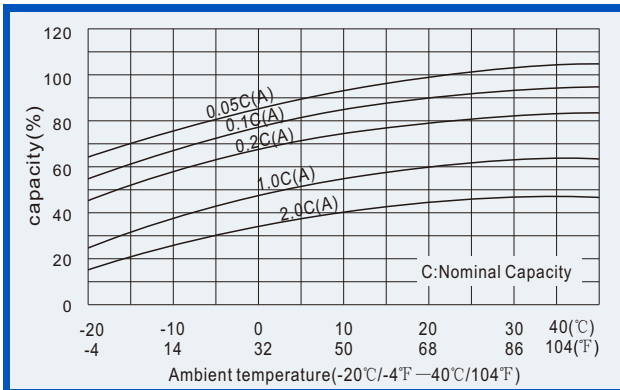
Charge characteristics (25°C, 77°F)



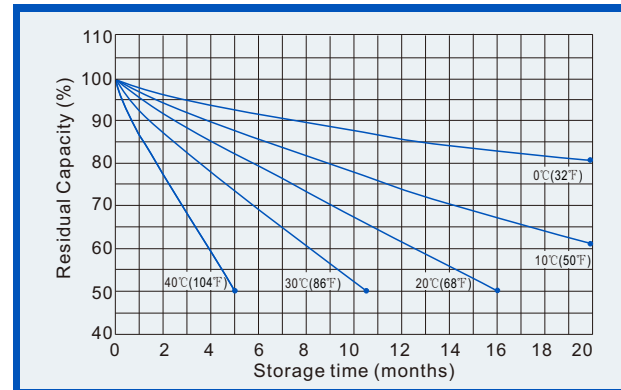
Life characteristics of Cyclic Use (25°C, 77°F)



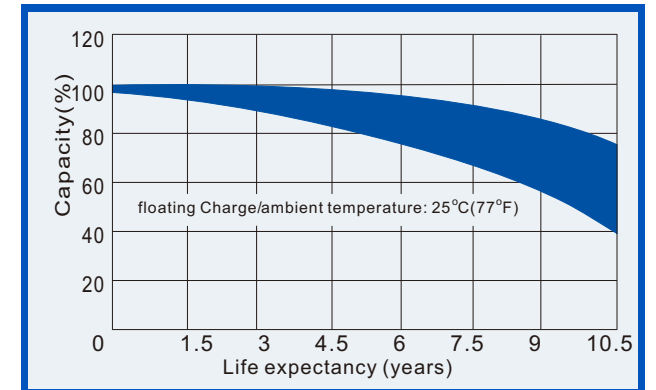
Effect of Temperature on capacity



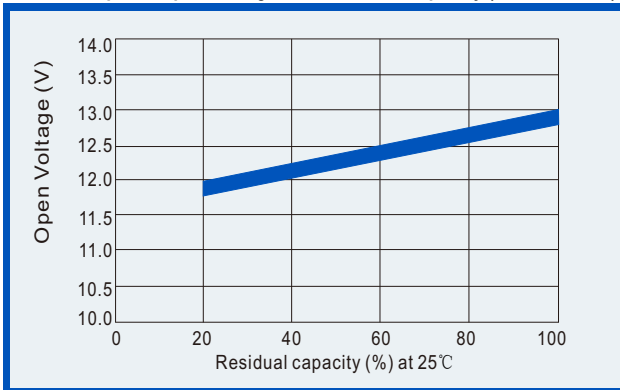
Self-discharge characteristics



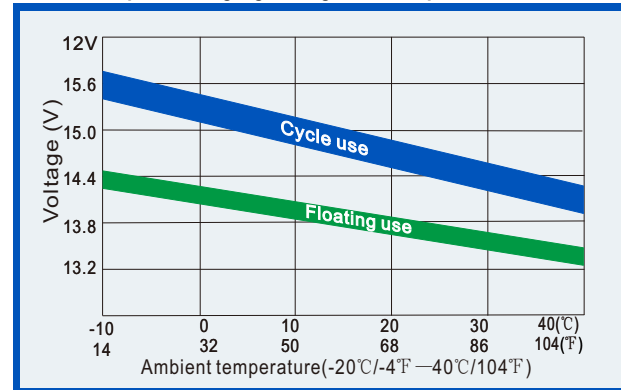
Life Characteristics of standby use (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

