

SLA BATTERY—STANDARD SERIES
Specification

| | |
|------------------------|--|
| Nominal Voltage | 12V |
| Number of cell | 6 |
| Nominal Capacity | 4.0Ah@20hr-rate (0.2A to 1.80V/cell @25°C) |
| Weight | Approx. 1.35Kg |
| Terminal | F1 |
| Container Material | ABS (UL94-HB), Flammability resistance of UL94-V1 can be available upon request. |
| Rated Capacity | 4.0Ah 20hr-rate (0.20A to 1.80V/cell @25°C) |
| | 3.85Ah 10hr-rate (0.385A to 1.80V/cell @25°C) |
| | 3.50Ah 5hr-rate (0.7A to 1.75V/cell @25°C) |
| | 2.84Ah 1hr-rate (2.84A to 1.60V/cell @25°C) |
| Max. Discharge Current | 60A(5sec) |
| Internal Resistance | Approx. 40mΩ(Fully charged) |
| Operating Temp. Range | Discharge: -20°C~50°C |
| | Charge : -10°C~50°C |
| | Storage : -20°C~40°C |
| Cycle Use | Charging Current: ≤1.2A |
| | Voltage: 14.6V~14.8V |
| | Temperature compensation: -30mV/°C |
| Standby Use | Charging Current: No limit |
| | Voltage: 13.6V~13.8V |
| | Temperature compensation: -20mV/°C |
| Self-Discharge | less than 3% at 25°C |
| Design Life | 6 years (floating charge) |


Introduction

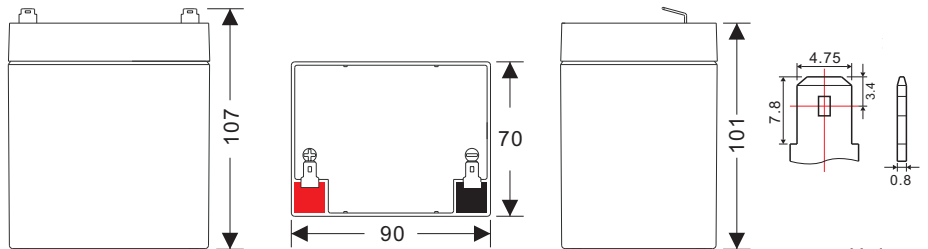
The MOTOMA standard series batteries designed with 6 years or more service life for general purpose, which designed with advanced technology, super heavy duty grid, high performance plates and electrolyte. The standard series batteries have long and reliable standby life and high consistency for better performance in series usage.

Applications

- ◆ Auto control system & ATM machine
- ◆ Electronic apparatus and equipment
- ◆ Emergency light & Emergency backup power supply & Alarm/Security system
- ◆ Power generation system (solar and wind power system, etc.)
- ◆ Communication power & DC power
- ◆ Electric Power System (EPS)
- ◆ Uninterruptable Power System (UPS)
- ◆

Dimensions

| | |
|--------------|-----------------------|
| Length | 90±1mm (3.54 inches) |
| Width | 70±1mm (2.76 inches) |
| Height | 101±1mm (3.98 inches) |
| Total Height | 107±1mm (4.21 inches) |



Unit: mm

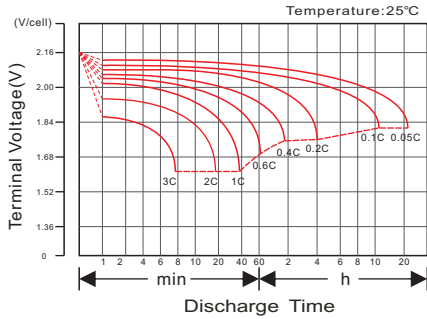
Constant Current Discharge Characteristics: A (25°C)

| F. V/Time | 5min | 10min | 15min | 30min | 1h | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V/cell | 16.20 | 10.82 | 8.323 | 4.809 | 2.845 | 1.483 | 1.050 | 0.861 | 0.714 | 0.473 | 0.410 | 0.230 |
| 1.65V/cell | 15.61 | 10.40 | 8.056 | 4.736 | 2.829 | 1.472 | 1.046 | 0.857 | 0.709 | 0.472 | 0.406 | 0.222 |
| 1.70V/cell | 14.77 | 10.08 | 7.871 | 4.699 | 2.809 | 1.469 | 1.041 | 0.853 | 0.705 | 0.470 | 0.401 | 0.217 |
| 1.75V/cell | 13.34 | 9.434 | 7.461 | 4.592 | 2.768 | 1.451 | 1.037 | 0.849 | 0.701 | 0.468 | 0.397 | 0.209 |
| 1.80V/cell | 11.91 | 8.791 | 7.048 | 4.481 | 2.727 | 1.426 | 1.029 | 0.845 | 0.697 | 0.466 | 0.389 | 0.201 |
| 1.85V/cell | 10.50 | 8.144 | 6.638 | 4.371 | 2.690 | 1.405 | 1.021 | 0.841 | 0.693 | 0.464 | 0.385 | 0.197 |

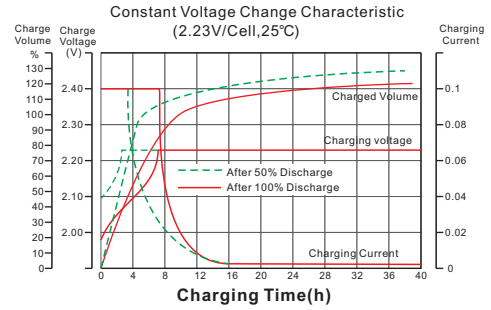
Constant Power Discharge Characteristics: W (25°C)

| F. V/Time | 5min | 10min | 15min | 30min | 1h | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V/cell | 177.1 | 115.1 | 93.55 | 57.71 | 34.12 | 17.78 | 12.57 | 10.28 | 10.06 | 5.692 | 4.845 | 2.708 |
| 1.65V/cell | 172.5 | 115.0 | 92.21 | 56.78 | 34.02 | 17.67 | 12.55 | 10.26 | 9.98 | 5.646 | 4.795 | 2.609 |
| 1.70V/cell | 169.1 | 111.6 | 90.09 | 56.41 | 33.95 | 17.63 | 12.52 | 10.26 | 9.96 | 5.638 | 4.746 | 2.559 |
| 1.75V/cell | 152.8 | 107.0 | 85.40 | 55.05 | 33.38 | 17.35 | 12.45 | 10.18 | 9.932 | 5.623 | 4.696 | 2.460 |
| 1.80V/cell | 136.5 | 100.1 | 80.69 | 53.75 | 32.82 | 17.11 | 12.35 | 10.11 | 9.907 | 5.600 | 4.621 | 2.385 |
| 1.85V/cell | 120.2 | 93.15 | 76.00 | 52.45 | 32.25 | 16.86 | 12.25 | 10.04 | 9.882 | 5.600 | 4.547 | 2.311 |

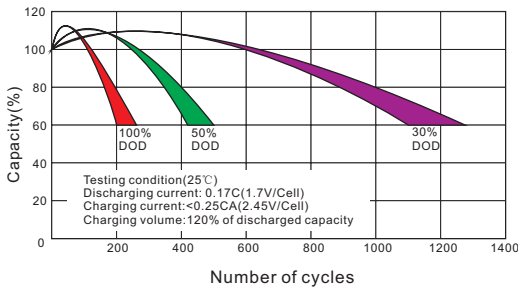
Discharge Characteristics Curve



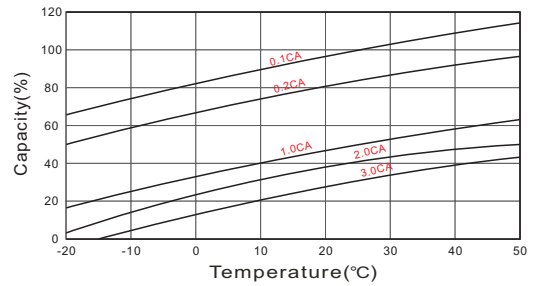
Charging Characteristics Curve



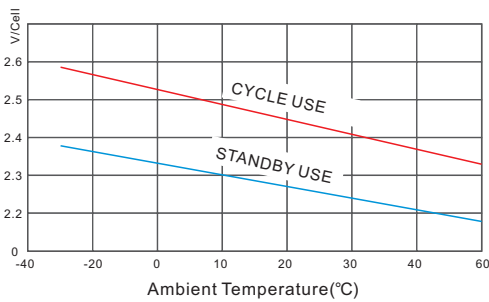
Cycle life in relation to depth of Discharge



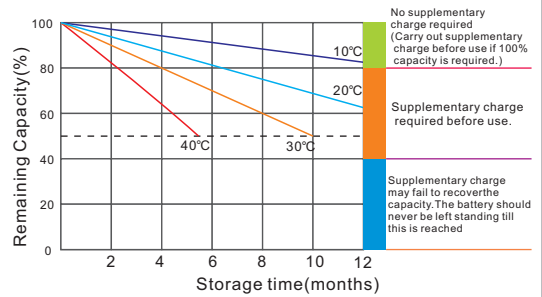
Temperature effects on Capacity



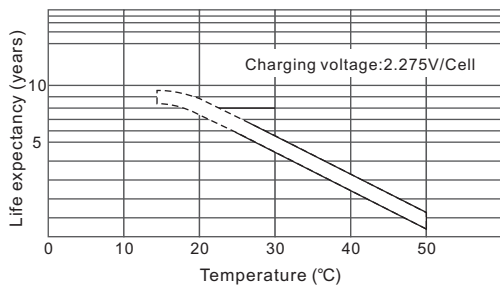
Relationship between charging voltage and temperature



Self-discharge Characteristics



Temperature effects on Float life



Life Characteristics of Standby use

