# JC12-2.1

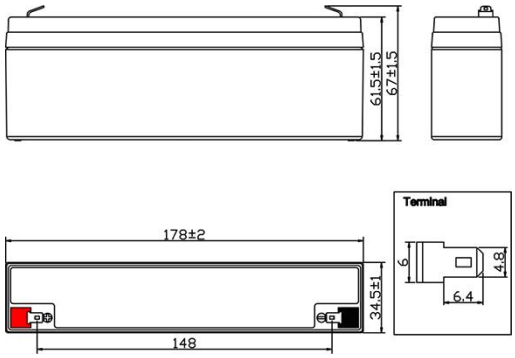
12V 2.1Ah




JAPCELL JC12-1.2 is an AGM battery. It is designed for stand-by applications such as Security and Alarm systems, Medical Facilities and Hospitals or UPS-systems.

## SPECIFICATION

| | |
|---|---|
| **Nominal Voltage** | 12V (6 cells in series) |
| **Rated Capacity** | 2.1Ah ($C_{20}$,1.75V/cell) |
| **Dimensions(mm)** | 178 Length x 34.5 Width x 61.5 mm (max. 67) Height |
| **Nominal Capacity @25℃ (Ah)** | 20 Hour rate (0.111A to 10.5 volts) 2.22Ah<br>10 Hour rate (0.212A to 10.5 volts) 2.12Ah<br>5 Hour rate (0.380A to 10.5 volts) 1.90Ah<br>1 Hour rate (1.430A to 9.6 volts) 1.43Ah<br>15 min rate (4.235A to 9.6 volts) 1.05Ah |
| **Approx. Weight** | 0.9 kg |
| **Terminal** | F1-A |
| **Max.Discharge Current** | 34.5A @25℃ (5s) |
| **Internal Resistance** | 56mΩ @25℃ |
| **Floating Design Life** | 5 years @25℃ |
| **Ambient Temperature** | Charge：-15℃~50℃<br>Discharge：-20℃~60℃<br>Storage：-20℃~50℃ |
| **Container Material** | A.B.S, UL94-HB, UL94-V0, Optional |
| **Self Discharge** | VRLA batteries can be stored for more than 6 months at 25℃.<br>Self-Discharge ratio less than 3 % per month at 25℃.<br>Please charge batteries before using. |




## CONSTANT CURRENT DISCHARGE CHARACTERISTICS (A), (25℃)

| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2H | 3H | 5H | 8H | 10H | 20H |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.60V/cell** | 8.679 | 5.687 | 4.235 | 2.255 | 1.430 | 0.806 | 0.575 | 0.388 | 0.257 | 0.220 | 0.118 |
| **1.70V/cell** | 7.876 | 5.269 | 3.993 | 2.189 | 1.398 | 0.793 | 0.561 | 0.382 | 0.253 | 0.215 | 0.114 |
| **1.75V/cell** | 7.073 | 4.939 | 3.773 | 2.123 | 1.381 | 0.787 | 0.556 | 0.380 | 0.251 | 0.212 | 0.111 |
| **1.80V/cell** | 6.347 | 4.620 | 3.553 | 2.057 | 1.361 | 0.780 | 0.549 | 0.375 | 0.248 | 0.209 | 0.107 |

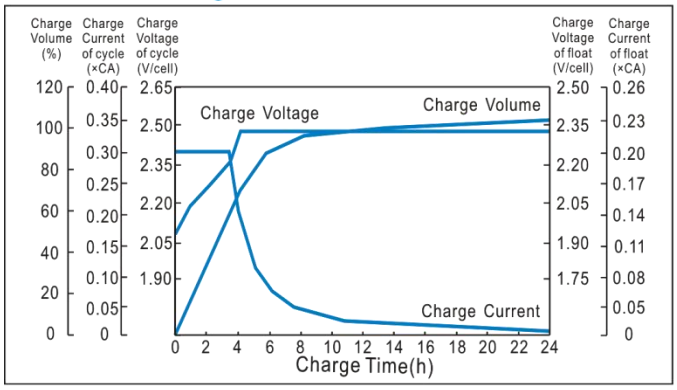
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12V 2.1Ah

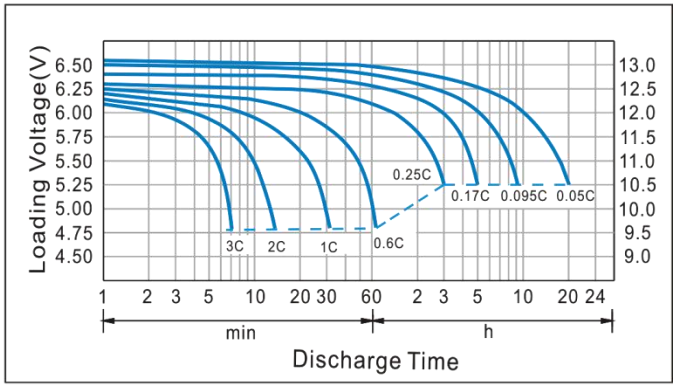
## CONSTANT WATTAGE DISCHARGE CHARACTERISTICS (WATT), (25℃)

| F.V/Time | 5min | 10min | 15min | 30min | 60min | 2H | 3H | 5H | 8H | 10H | 20H |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1.60V/cell** | 15.69 | 10.38 | 7.799 | 4.303 | 2.836 | 1.598 | 1.147 | 0.774 | 0.513 | 0.439 | 0.235 |
| **1.70V/cell** | 14.50 | 9.792 | 7.487 | 4.214 | 2.785 | 1.580 | 1.120 | 0.763 | 0.505 | 0.429 | 0.227 |
| **1.75V/cell** | 13.20 | 9.343 | 7.137 | 4.122 | 2.752 | 1.568 | 1.110 | 0.758 | 0.501 | 0.425 | 0.223 |
| **1.80V/cell** | 11.95 | 8.817 | 6.780 | 4.028 | 2.715 | 1.556 | 1.098 | 0.750 | 0.495 | 0.418 | 0.214 |

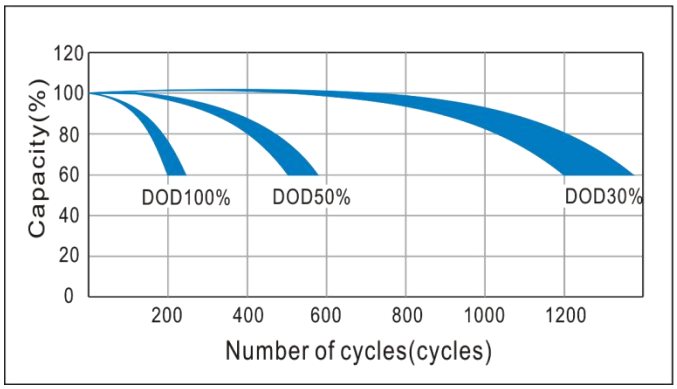
### Charge Characteristics Curve



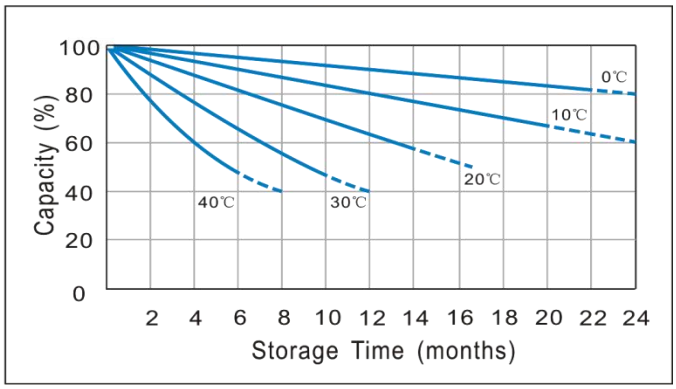

### Discharge Characteristics Curve




### Cycle service life in relation to depth of discharge




### Capacity Storage Characteristics




## CAPACITY FACTORS WITH DIFFERENT TEMPERATURE

| Battery type | | -20℃ | -10℃ | 0℃ | 5℃ | 10℃ | 20℃ | 25℃ | 30℃ | 40℃ | 45℃ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **GEL Battery** | **6V & 12V** | 50% | 70% | 83% | 85% | 90% | 98% | 100% | 102% | 104% | 105% |
| | **2V** | 60% | 75% | 85% | 88% | 92% | 99% | 100% | 103% | 105% | 106% |
| **AGM Battery** | **6V & 12V** | 46% | 66% | 76% | 83% | 90% | 98% | 100% | 103% | 107% | 109% |
| | **2V** | 55% | 70% | 80% | 85% | 92% | 99% | 100% | 104% | 108% | 110% |

## CHARGING METHOD

☼ Charging Procedure：

| Application | Charging method | Charge voltage at 25℃ | Temperature compensation coefficient of charging voltage | Max.charging current | Temperature |
|---|---|---|---|---|---|
| For standby power source | Constant voltage charging (With current restriction) | 2.25~2.30 V/cell | -3mV/℃/cell | 0.2CA | -15~50℃ |
| For cycle service | | 2.45~2.50 V/cell | -4mV/℃/cell | 0.3CA | |

☼ Charge the batteries at least once every six months, if they are stored at 25℃.

Constant Voltage: -0.2C×2h+2.45-2.50V/cell×24h, Max. Current 0.25CA

Constant Current: -0.2C×2h+0.1C×12h

Fast: -0.2C×2h+0.3C×4h