



# GEL VALVE REGULATED RECHARGEABLE BATTERY



**MODEL: G12-100(12V 100AH)**

# SOLAR BATTERY

LEGACY CANADIAN PRODUCTS  
DESIGNED IN CANADA,  
ASSEMBLED IN CHINA

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# 1. PRODUCT DIMENSIONS



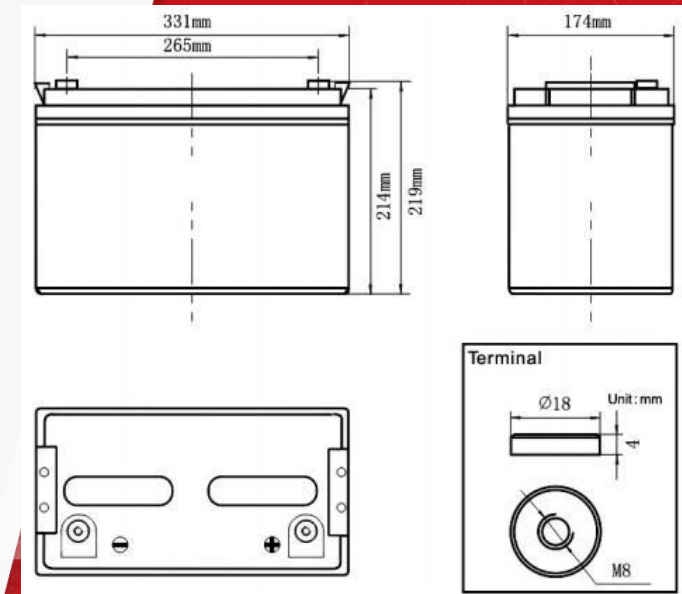
**G12-100(12V 100AH)**

|                               |                     |             |
|-------------------------------|---------------------|-------------|
| <b>BATTERY DIMENSION (MM)</b> | <b>LENGTH</b>       | <b>331</b>  |
|                               | <b>WIDTH</b>        | <b>174</b>  |
|                               | <b>HEIGHT</b>       | <b>214</b>  |
|                               | <b>TOTAL HEIGHT</b> | <b>219</b>  |
| <b>BOX DIMENSION (MM)</b>     | <b>LENGTH</b>       | <b>346</b>  |
|                               | <b>WIDTH</b>        | <b>188</b>  |
|                               | <b>HEIGHT</b>       | <b>289</b>  |
| <b>QUANTITY PER BOX</b>       |                     | <b>1PC</b>  |
| <b>N.W PER CELL (KG)±400g</b> |                     | <b>29.0</b> |
| <b>N.W PER BOX (KG)</b>       |                     | <b>29.0</b> |
| <b>G.W PER BOX (KG)</b>       |                     | <b>30.0</b> |

## 2.PRODUCT CHARACTERISTICS

|                                       |                                  |   |
|---------------------------------------|----------------------------------|---|
| NOMINAL VOLTAGE                       |                                  | 12V   |
| NOMINAL CAPACITY (10 HOUR RATE)       |                                  | 100AH   |
| CAPACITY @25°C (77°F)                 | 20 HOUR RATE(5.55A)              | 111.0AH   |
|                                       | 5 HOUR RATE(18.3A)               | 91.5AH  |
|                                       | 1 HOUR RATE(66.5A)               | 66.5AH  |
| CYCLE LIFE(@25°C)                     | 100%DOD                          | 800 TIMES   |
|                                       | 50%DOD                           | 1250 TIMES  |
|                                       | 30%DOD                           | 1750 TIMES  |
| DESIGN LIFE                           | 8 YEARS                          |   |
| SELF-DISCHARGE(@25°C)                 | < 3%/MONTH                       |   |
| INTERNAL RESISTANCE                   | FULL CHARGED BATTERY 25°C ≤5.0mΩ |   |
| CHARGE (CONSTANT VOLTAGE) @25°C(77°F) | FLOAT                            | INITIAL CHARGING CURRENT LESS THAN 25.0A VOLTAGE 13.6-13.8V |
|                                       | CYCLE                            | INITIAL CHARGING CURRENT LESS THAN 25.0A VOLTAGE 14.4-14.9V |

### G12-100(12V 100AH)




**TERMINAL:M8**

## 3. DISCHARGE CONSTANT CURRENT PER CELL


| F.V/TIME | 5MIN  | 10MIN | 15 MIN | 30MIN | 45MIN | 1H   | 2H   | 3H   | 5H   | 8H   | 10H  | 20H  |
|----------|-------|-------|--------|-------|-------|------|------|------|------|------|------|------|
| 1.60V    | 336.3 | 224.0 | 168.8  | 105.1 | 75.4  | 66.5 | 40.5 | 29.6 | 19.1 | 11.6 | 10.4 | 5.77 |
| 1.65V    | 310.0 | 206.5 | 161.8  | 102.2 | 73.4  | 64.7 | 39.8 | 29.1 | 18.8 | 11.5 | 10.3 | 5.72 |
| 1.70V    | 315.2 | 210.0 | 154.8  | 99.4  | 71.3  | 63.0 | 39.1 | 28.6 | 18.5 | 11.4 | 10.2 | 5.66 |
| 1.75V    | 278.2 | 185.5 | 147.7  | 96.6  | 69.3  | 61.2 | 38.1 | 27.9 | 18.3 | 11.3 | 10.1 | 5.61 |
| 1.80V    | 262.7 | 175.0 | 140.7  | 93.8  | 67.3  | 59.4 | 37.2 | 27.2 | 18.0 | 11.2 | 10.0 | 5.55 |

| F.V/TIME | 5MIN  | 10MIN | 15 MIN | 30MIN | 45MIN | 1H    | 2H   | 3H   | 5H   | 8H   | 10H  | 20H  |
|----------|-------|-------|--------|-------|-------|-------|------|------|------|------|------|------|
| 1.60V    | 627.1 | 417.8 | 314.9  | 195.9 | 140.6 | 124.1 | 75.6 | 55.3 | 35.6 | 21.7 | 19.4 | 10.8 |
| 1.65V    | 578.1 | 385.1 | 301.8  | 190.7 | 136.8 | 120.8 | 74.2 | 54.3 | 35.1 | 21.5 | 19.2 | 10.7 |
| 1.70V    | 587.9 | 391.7 | 288.6  | 185.4 | 133.0 | 117.4 | 72.8 | 53.3 | 34.6 | 21.3 | 19.0 | 10.6 |
| 1.75V    | 519.3 | 346.0 | 275.5  | 180.2 | 129.3 | 114.1 | 71.1 | 52.0 | 34.1 | 21.1 | 18.8 | 10.5 |
| 1.80V    | 489.9 | 326.4 | 262.4  | 174.9 | 125.5 | 110.8 | 69.4 | 50.7 | 33.6 | 20.9 | 18.7 | 10.4 |

| COMPONENT    | POSITIVE PLATE | NEGATIVE PLATE | CONTAINER | COVER | SATETY VALVE | TERMINAL | SEPERATOR  | ELECTROLYTE |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|-------------|
| RAW MATERIAL | LEAD DIOXIDE   | LEAD           | ABS       | ABS   | SI-RUBBER    | COPPER   | FIBERGLASS | GEL         |



**Amperes at  
(77°F/25°C)**

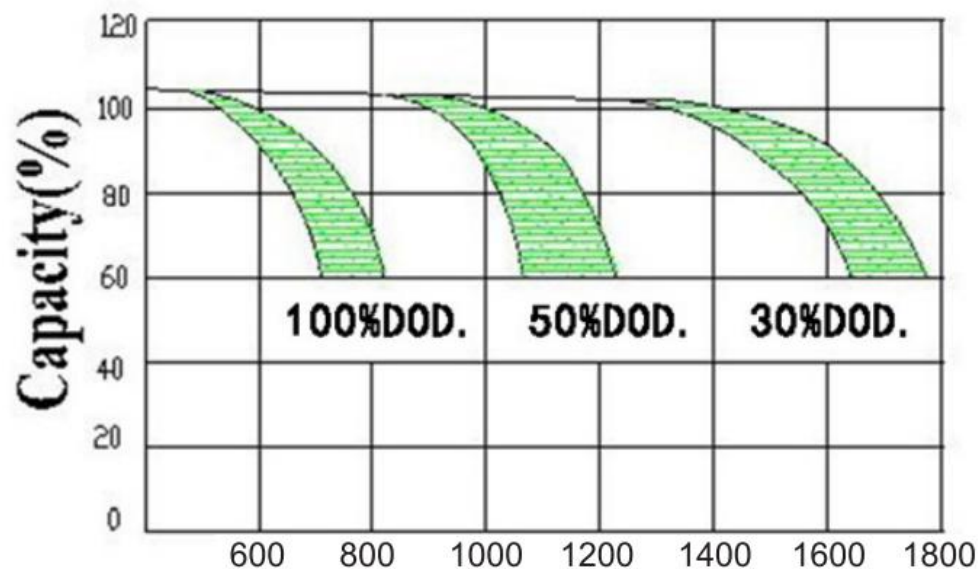


**Watts at  
(77°F/25°C)**

**Battery  
Construction**

## 4. PERFORMANCE CHARACTERISTICS

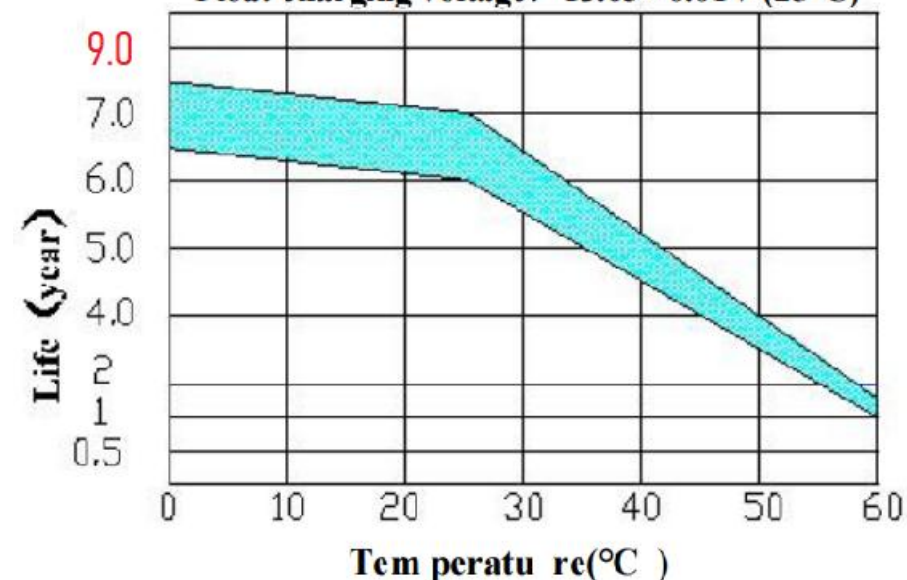
Cycle life vs. Depth of discharge (25°C)



**CYCLE LIFE: 100%DOD 800TIMES  
(@25°C) 50%DOD 1250TIMES  
30%DOD 1750TIMES**

Temperature effect on float life

Float charging voltage: 13.65 ± 0.01V (25°C)

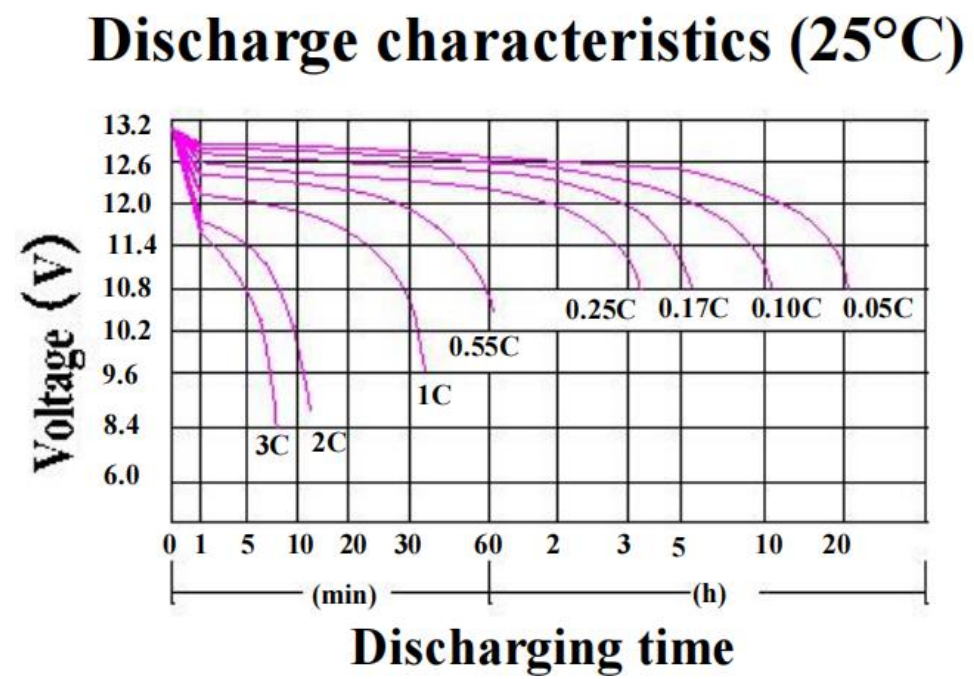
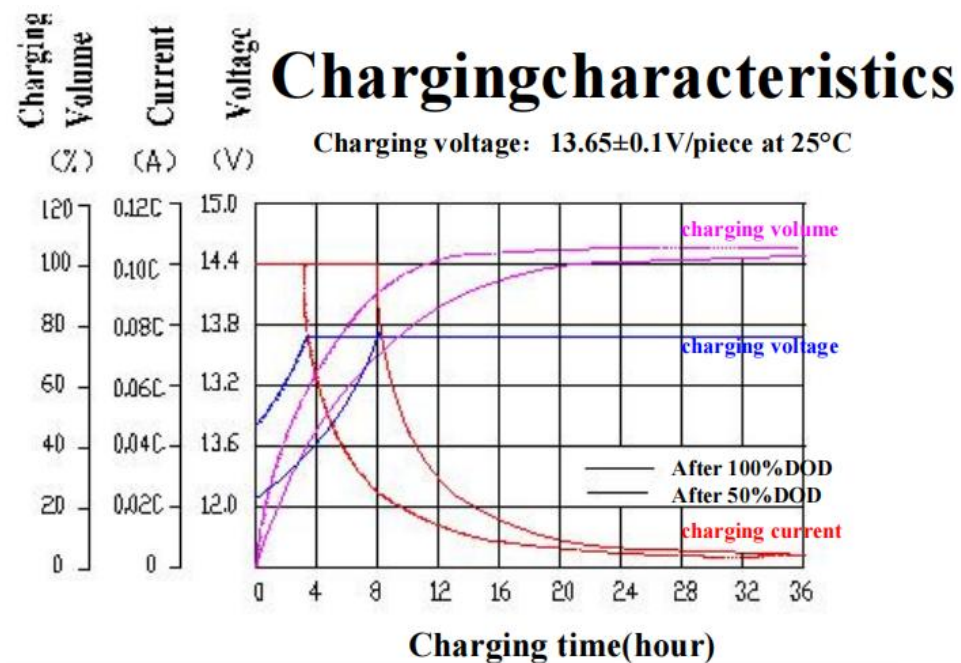


**WORKING LIFE: UP TO 8 YEARS**

**WARRANTY: 2 YEARS**

Note:1)The above datas are average values, and can be obtained within 3 charge/ discharge cycles. These are not minimum values.  
2)Cell and battery designs/specifications are subject to modification without notice.

# 5. CHARGE AND DISCHARGE CHARACTERISTICS



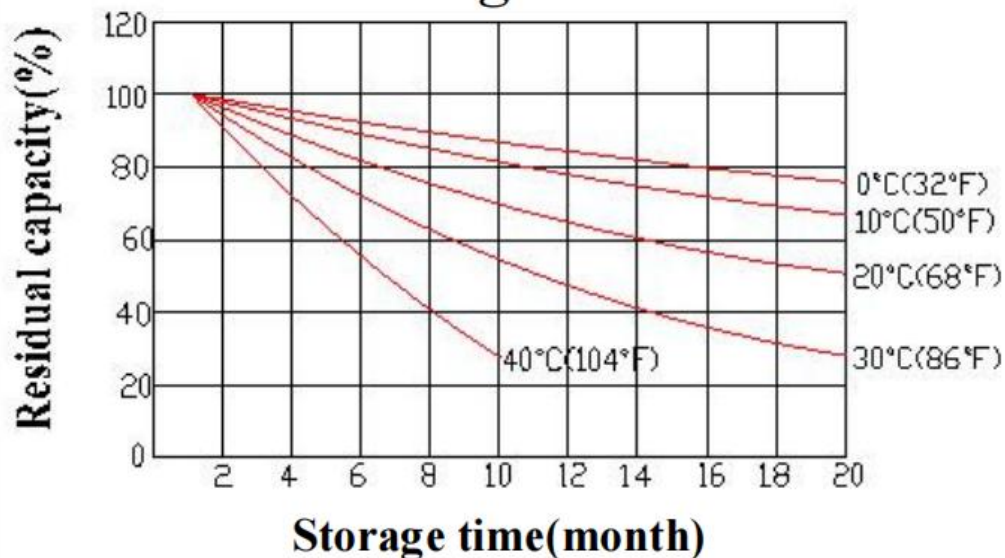
**FLOAT TEMPERATURE COMPENSATION COEFFICIENT( $25^{\circ}\text{C}$ ):  $-2\text{mV}/\text{Cell C}$**

**EQUALIZATION TEMPERATURE COMPENSATION COEFFICIENT( $25^{\circ}\text{C}$ ):  $-5\text{mV}/\text{Cell C}$**

Note: 1) The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values.  
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## 6. TEMPERATURE EFFECTED CHARACTERISTICS

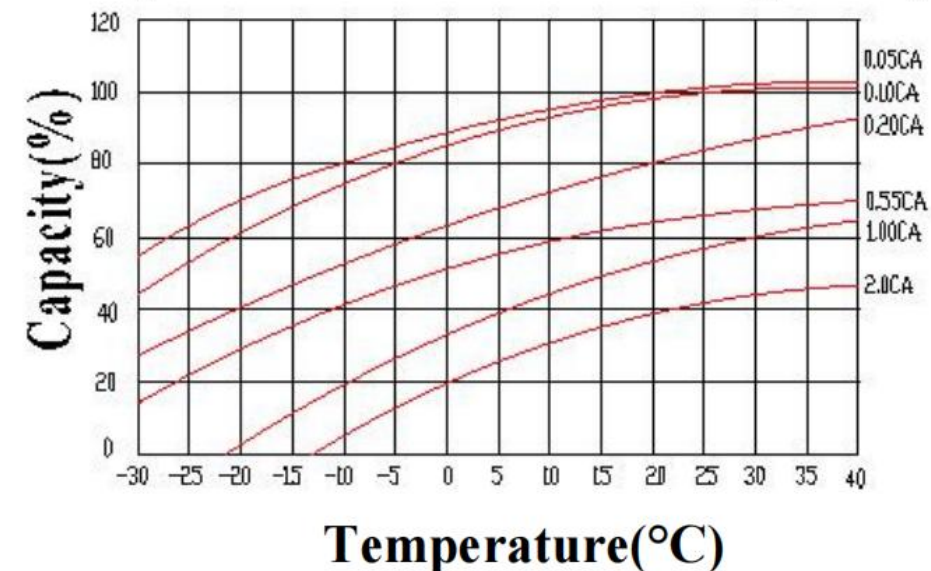
### Temperature effect on battery self-discharge



**SELF-DISCHARGE CAPACITY(25°C):**

**AFTER 3 MONTHS: 92%**  
**AFTER 6 MONTHS: 84%**  
**AFTER 12 MONTHS: 65%**

### Temperature effect on capacity



**CAPACITY AFFECTED BY TEMPERATURE:**  
**40°C : 102%**  
**25°C : 100%**  
**0°C : 85%**  
**-15°C : 65%**

*Note:*

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