

# TECHNICAL DATA SHEET

## DGY12-110EV



### Applications

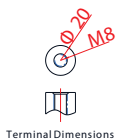
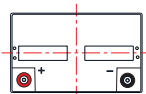
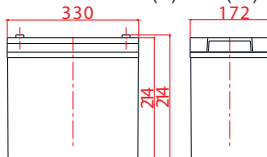
- › Electric vehicle
- › Electric wheelchair
- › Electric scooter
- › Electric play car for children
- › Garbage truck
- › Patrol car

### General Features

- › Nanosilica colloidal electrolyte and high tin positive plate alloy design to enhance battery performance
- › Relatively rich electrolyte, high temperature and low temperature performance is superior
- › Long cycle life, excellent deep cycle discharge ability
- › Excellent charge acceptance ability
- › Precision sealing technology
- › Long life



Dimension: 330(L)×172(W)×214(H)×214(TH) Unit: mm



### Specification

|                    |                         |
|--------------------|-------------------------|
| Nominal Voltage    | 12V                     |
| Nominal Capacity   | 123Ah                   |
| Design life        | 5 years                 |
| Terminal           | M8                      |
| Approx. Weight     | Approx 32.0kg (70.6lbs) |
| Container Material | ABS                     |

**123Ah** 20Hour Rate (6.18A to 10.5V)

Rated Capacity **116Ah** 10Hour Rate (11.6A to 10.5V)

**110Ah** 5Hour Rate (22.0A to 10.5V)

|                       |            |                        |
|-----------------------|------------|------------------------|
| Operating Temperature | Discharge: | -20 ~50°C (-4 ~ 122°F) |
|                       | Charge:    | -20 ~50°C (-4 ~ 122°F) |
|                       | Storage:   | -20 ~50°C (-4 ~ 122°F) |

Charge current: Max. 20.0A

Charge Method Float Charge: 13.7 -13.9V, recom. 13.8V (-18mV/ °C)  
(25 °C)  
Cycle charge: 14.28 -14.4V, recom. 14.4V (-30mV/ °C)

Self discharge 3% of capacity declined per month at 25°C

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

| F.V/Time | 5Min | 15Min | 30Min | 1h   | 2h   | 3h   | 5h   | 8h   | 10h  | 20h  |
|----------|------|-------|-------|------|------|------|------|------|------|------|
| 1.60V    | 426  | 228   | 139   | 81.3 | 46.6 | 34.6 | 22.8 | 14.6 | 12.0 | 6.28 |
| 1.65V    | 413  | 222   | 137   | 80.8 | 46.4 | 34.2 | 22.5 | 14.4 | 11.8 | 6.24 |
| 1.70V    | 396  | 217   | 134   | 80.3 | 46.0 | 33.7 | 22.3 | 14.3 | 11.8 | 6.21 |
| 1.75V    | 364  | 210   | 133   | 79.1 | 45.3 | 33.3 | 22.0 | 14.2 | 11.6 | 6.18 |
| 1.80V    | 327  | 196   | 128   | 77.0 | 44.5 | 33.1 | 21.4 | 14.1 | 11.5 | 6.15 |
| 1.85V    | 291  | 174   | 116   | 71.3 | 42.3 | 31.2 | 20.3 | 13.5 | 11.2 | 6.05 |

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

| F.V/Time | 5Min | 15Min | 30Min | 1h  | 2h   | 3h   | 5h   | 8h   | 10h  | 20h  |
|----------|------|-------|-------|-----|------|------|------|------|------|------|
| 1.60V    | 713  | 403   | 252   | 153 | 88.3 | 65.8 | 43.1 | 28.3 | 23.0 | 12.4 |
| 1.65V    | 686  | 396   | 249   | 153 | 88.3 | 64.9 | 42.8 | 28.1 | 22.8 | 12.3 |
| 1.70V    | 683  | 391   | 249   | 152 | 87.5 | 64.5 | 42.5 | 27.9 | 22.5 | 12.3 |
| 1.75V    | 637  | 388   | 248   | 150 | 87.5 | 64.2 | 42.3 | 27.8 | 22.3 | 12.3 |
| 1.80V    | 584  | 368   | 243   | 149 | 86.7 | 63.9 | 41.8 | 27.5 | 22.1 | 12.2 |
| 1.85V    | 522  | 328   | 222   | 138 | 83.3 | 60.8 | 39.9 | 26.6 | 21.8 | 12.1 |

Disclaimer: Manufacturers have the right to self-modify the parameters of the product updates, please keep in touch with manufacturers to obtain the latest information.

## Charger recommendations

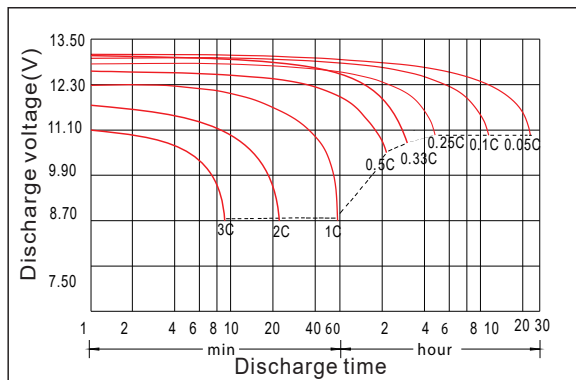
| Brand            | Zivan              | AQ-Tron HF         |                              |                       |
|------------------|--------------------|--------------------|------------------------------|-----------------------|
| Reference        | All ZIV references | LAD/AQHF24-30FC G2 | BAT/47711                    | LAD/AQHFVV-AA WP PPP* |
| Specs            |                    | 24V 30A            | 12V-48V 15A-30A programmable | Waterproof series     |
|                  |                    |                    |                              |                       |
| Matching profile | BA1                | AGM profile        | AGM profile                  | AGM profile           |
|                  | CU2                |                    |                              | SLA profile           |

\*F.e. LAD/AQHF12-20 WP SLA

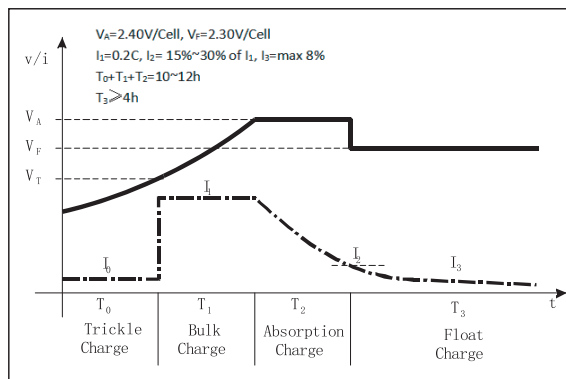
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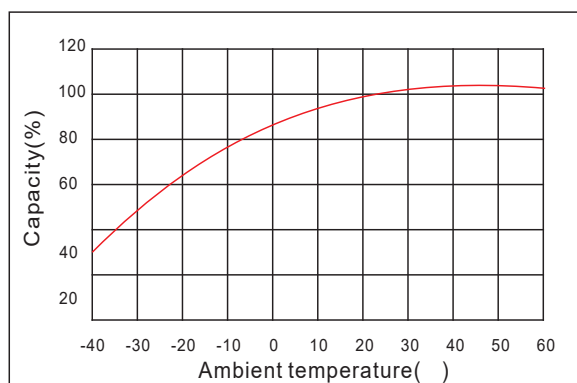
## Discharge characteristic



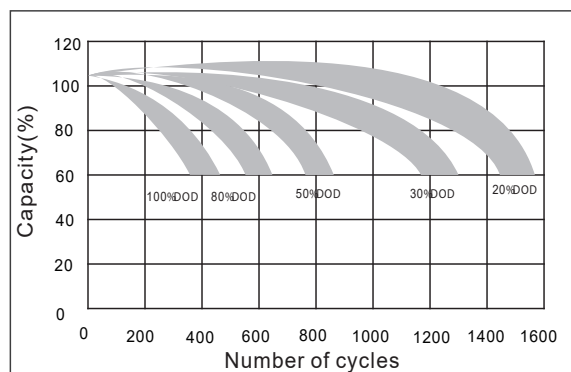
## Charging characteristic



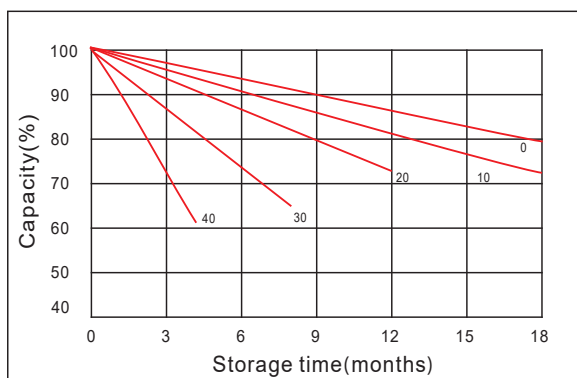
## The effect of temperature on capacity



## The effect of discharge depth on cycle life



## Curves of self-discharge



## Curves of open circuit voltage vs. capacity

