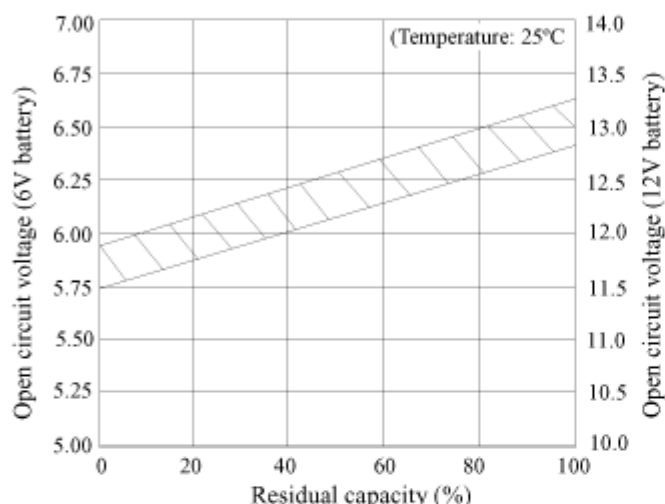


CHARACTERISTICS - CONTINUED

E) Open circuit voltage vs. Residual capacity

Residual capacity of the battery can be roughly estimated by measuring the open circuit voltage as shown in the Figure.

Open circuit voltage vs. Residual capacity 25°C



Temperature conditions

Recommended temperature ranges for charging, discharging and storing the battery are tabulated below.

Charge	0°C to 40°C
Discharge	-10°C to 60°C
Storage	-10°C to 40°C

• Battery life

A) Cycle life

Cyclic life (number of cycles) of the battery is dependent on the depth of discharge in each cycle. The deeper the discharge is, the shorter the cycle life (smaller number of cycles), providing the same discharge current. The cyclic life (number of cycles) of the battery is also related to such factors as the type of the battery, charge method, ambient temperature, and rest period between charge and discharge. Typical cycle-life characteristics of the battery by different charge/discharge conditions are shown by the below figures.

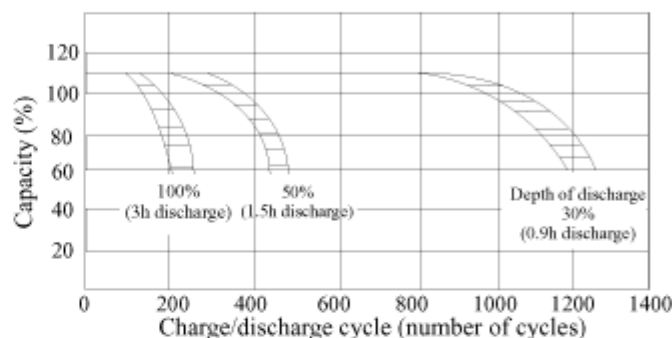
This data is typical and tested at a well equipped laboratory.

Cycle times are different for each battery model.

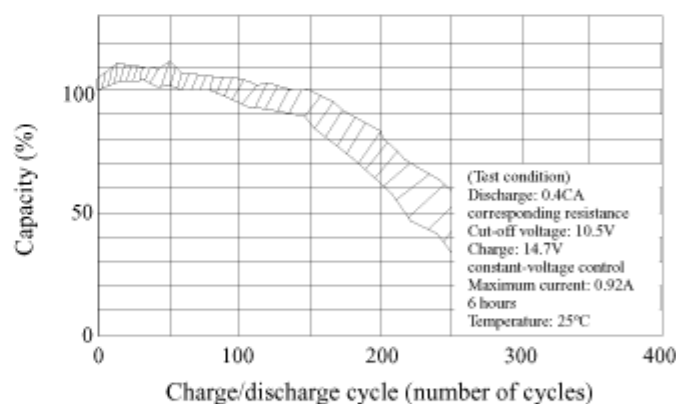
Cycle times are also different from this data when using batteries under real conditions.

Cycle life vs. Depth of discharge

(Test condition)
Discharge: 0.25CA corresponding resistance
Cut-off voltage: Discharge depth 100% only 1.75V/cell
Charge: 14.7V constant-voltage control
Maximum current: 0.4CA
6 hours
Temperature: 25°C



Constant- voltage cycle life characteristics



Rapid-charge cycle life characteristics

