

### Long Cycle Service Life

Depending upon the average depth of discharge, over a thousand discharge/charge cycles can be expected.

### Float Service Life

The expected service life is five years in float standby applications.

### Separators

The use of the special separator material provides a very efficient insulation between plates preventing inter-plate short circuits and prohibiting the shedding of active materials.

### Long shelf Life

The extremely low shelf discharge rate allows the battery to be stored for extended periods up to one year at normal ambient temperatures with no permanent loss of capacity

### Operating Temperature Range

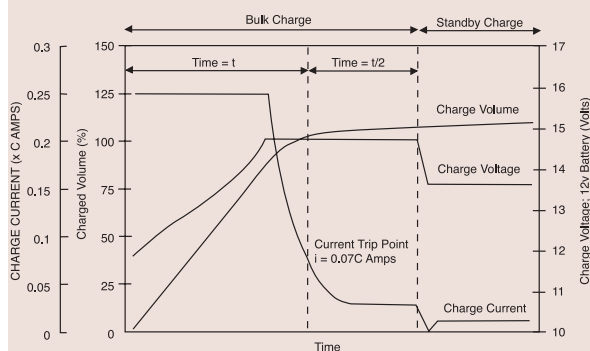
The batteries can be used over a broad temperature range permitting considerable flexibility in system design and location

Charge – 15C to 50C

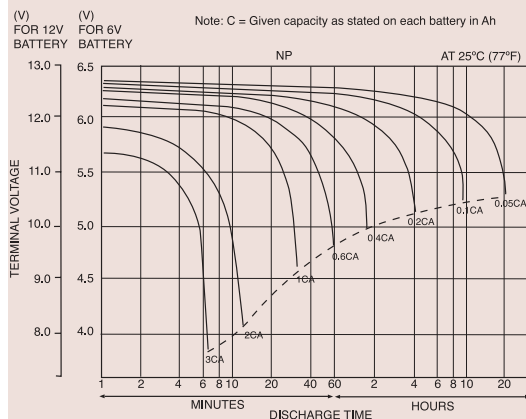
Discharge – 20C to 60C

Storage – 20C to 50C (fully charged battery)

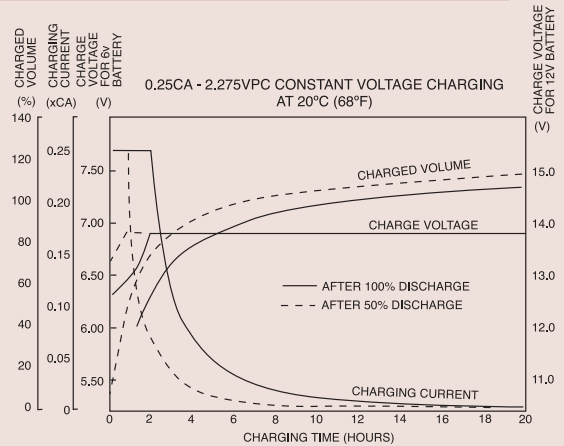
## NP SERIES CYCLIC RECHARGE REGIME



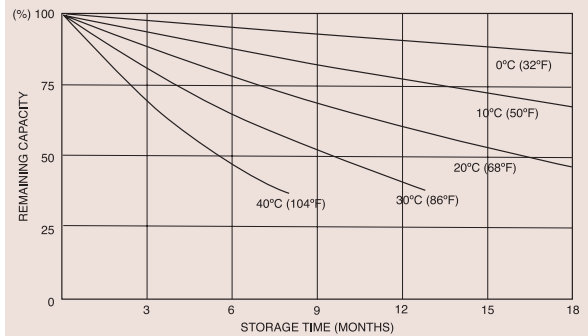
## NP DISCHARGE CHARACTERISTICS CURVES AT 25°C (77°F)



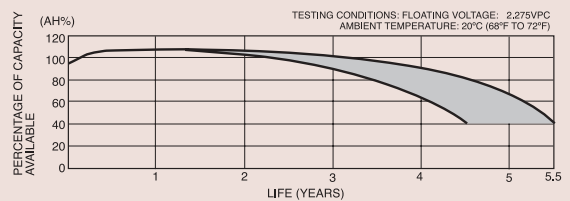
## FLOAT CHARGE CHARACTERISTICS



## SELF DISCHARGE CHARACTERISTICS



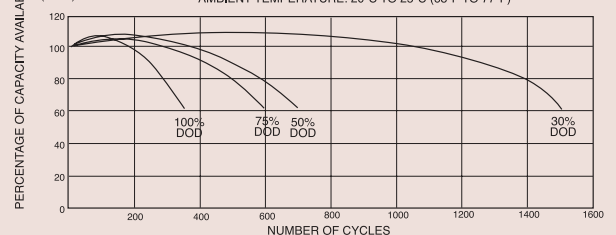
## FLOAT SERVICE LIFE NP RANGE



## TYPICAL DISCHARGE CHARACTERISTICS NPC RANGE

### CYCLE SERVICE LIFE IN RELATION TO DEPTH OF CHARGE

TESTING CONDITIONS: DISCHARGE CURRENT: 0.17C Amp. (F.V 1.7V/CELL)  
CHARGING CURRENT: 0.09C Amp.  
CHARGING VOLUME: 125% OF DISCHARGED CAPACITY  
AMBIENT TEMPERATURE: 20°C TO 25°C (68°F TO 77°F)



## INTELLIGENT BATTERY CHARGERS

Manufactured to BS3456, IEC335, UL 1236, EN60335, CE mark to EN5008-1

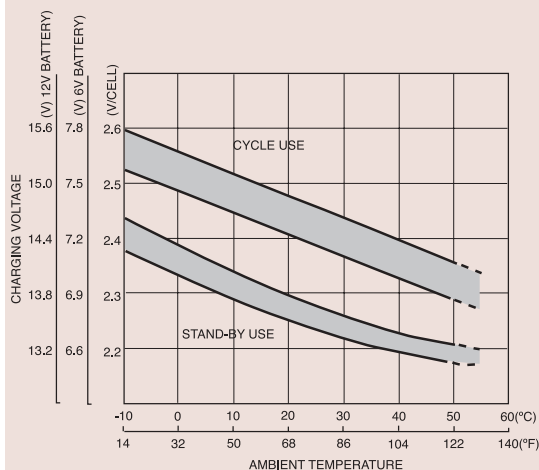
### Features

Micro processor controlled  
Short circuit protection  
Reverse polarity protection  
High temperature protection  
Soft start current control  
Fast constant current bulk charge  
3 stage charging CI-CV-float  
Constant voltage float/standby  
Proportional timing  
Flexibility, to match battery specification.

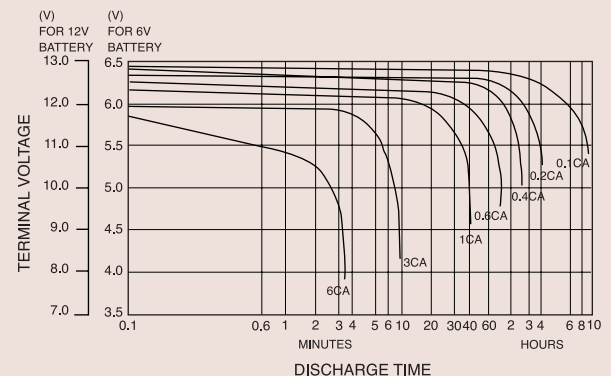
### Standard Range

|           |           |
|-----------|-----------|
| YCP03A12  | 300mA 12v |
| YCP03A24  | 300mA 24v |
| YCP03A6   | 300mA 6v  |
| YCP06A12  | 600mA 12v |
| YCP06A6   | 600mA 6v  |
| YCP1.5A12 | 1.5A 12v  |
| YCP1.5A24 | 1.5A 24v  |
| YCP1.5A6  | 1.5A 6v   |
| YCP10A12S | 10A 12v   |
| YCP1A12   | 1A 12v    |
| YCP1A6    | 1A 6v     |
| YCP2A12   | 2A 12v    |
| YCP2A24   | 2A 24v    |
| YCP2A6    | 2A 6v     |
| YCP3A12   | 3A 12v    |
| YCP4A12   | 4A 12v    |
| YCP6A12S  | 6A 12v    |
| YCP8A12S  | 8A 12v    |
| YCP8A24S  | 8A 24v    |

## RELATIONSHIP BETWEEN CHARGING VOLTAGE AND TEMPERATURE



## NPH DISCHARGE CHARACTERISTIC CURVES



### Standard NP

Available in a wide range of sizes to suit general applications.

### NPH/SW

High performance batteries specially designed for applications requiring high rate discharge, supplying up to 50% (NPH), 75% (SW) more power (Watts) for short durations when compared to conventional NP models.

### NPC

Specifically designed to suit the arduous requirements of cyclic applications allowing increased cycle life (at least double that of conventional types).

NPL Long Life Model also to BS6290pt4  
Dedicated literature available on request. (NPL Shortform).

### Applications

Yusasa NP batteries, having excellent deep discharge recovery characteristics coupled with long life on float standby, are ideal for numerous applications in both cyclic and standby modes. For advice on the use of NP batteries in your particular application please contact our Sales Office.

### Charging

For Cyclic Applications see charging characteristic graph.

### For Float Standby Applications

Charged at 2.275 volts per cell continuous. Battery will seek its own current level and float fully charged. However, users should be aware that when charging from fully discharged, the battery can draw an initial charge current of approximately 2cA. Care should therefore be taken to ensure that this initial charge current (if ungoverned) is within the output capability of the equipment. Final charge current at 2.275 volts per cell is typically between 0.0005cA to 0.004cA.

### CAUTION

Do not Short Circuit  
Do not charge in a sealed container  
Service life and operational characteristics will be affected by temperature  
AC Ripple reduces service life.

### WARNING!

The battery type NP65-121 must never be installed permanently suspended by their handles; they are not designed for this purpose.