## LX Series GEL type battery



## General Features

) High corrosion resistant performance: $\mathrm{Pb}-\mathrm{Ca}$ multi-alloy grid
) High energy density and power density
) Optimized capability of instant high-current discharging
) Excellent charge acceptance ability
) Excellent deep cycle discharge capability
) Strong high and low temperature performance
) Precision sealing technology


Dimension: $348(\mathrm{~L}) \times 167(\mathrm{~W}) \times 178(\mathrm{H}) \times 178(\mathrm{TH})$ Unit: mm


## Applications

) UPS/EPS
) Power systems
) Telecommunications system
) Emergency lighting, Auto control system
) Solar/wind generating storage cyclic
) Other general purpose

## Specification

| Nominal Voltage | 12 V |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Nominal Capacity | 65Ah |  |  |  |
| Design life | 12 years |  |  |  |
| Terminal | M8 |  |  |  |
| Approx. Weight | Approx 21.0 kg |  |  |  |
| Container Material | ABS |  |  |  |
| Rated Capacity | 65.0Ah 10Hour Rate (6.50A to 10.8V) |  |  |  |
|  | 52.5Ah | 3Hour Rate (17 |  | to 10.8 V ) |
|  | 42.6Ah | 1 Hour Rate |  | o 10.5 V ) |
| Internal resistance |  | Full charge | d at $25^{\circ} \mathrm{C}$ : | $7.5 \mathrm{~m} \Omega$ |
| Max. Discharge Current |  | 780A(5S) |  |  |
|  |  | Discharge: | $-20 \sim 50^{\circ}$ | - $122^{\circ} \mathrm{F}$ ) |
| Operating Temperature |  | Charge: | $-20 \sim 50^{\circ} \mathrm{C}$ | - $4 \sim 122^{\circ} \mathrm{F}$ ) |
|  |  | Storage: | $-20 \sim 50^{\circ} \mathrm{C}$ | 4~ $122^{\circ} \mathrm{F}$ ) |

Charge current: Max. 16.3A ; Recom.6.5A

Charge Method
Float Charge: $13.5-13.8 \mathrm{~V}$, recom. $13.5 \mathrm{~V}\left(-18 \mathrm{mV} /{ }^{\circ} \mathrm{C}\right)$ $\left(25^{\circ} \mathrm{C}\right)$

Equalize charge: $13.8-14.1 \mathrm{~V}$, recom. $14.1 \mathrm{~V}\left(-24 \mathrm{mV} /{ }^{\circ} \mathrm{C}\right)$
Cycle charge: $14.4-15.0 \mathrm{~V}$, recom. $14.4 \mathrm{~V}\left(-30 \mathrm{mV} /{ }^{\circ} \mathrm{C}\right)$
Self discharge
$3 \%$ of capacity declined per month at $25^{\circ} \mathrm{C}$

| Constant Current Discharge Characteristics Unit: $\mathrm{A}\left(25^{\circ} \mathrm{C}, 77^{\circ} \mathrm{F}\right)$ |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FV/Time | 5 min | 15 min | 30 min | 1 h | 2h | 3h | 5h | 8h | 10h | 20h |
| 1.60 V | 229 | 123 | 74.8 | 43.8 | 25.1 | 18.2 | 12.2 | 8.03 | 6.76 | 3.55 |
| 1.65 V | 222 | 119 | 73.6 | 43.5 | 25.0 | 18.0 | 12.1 | 7.96 | 6.70 | 3.53 |
| 1.70 V | 213 | 117 | 72.3 | 43.2 | 24.8 | 17.8 | 12.0 | 7.90 | 6.63 | 3.51 |
| 1.75 V | 196 | 113 | 71.7 | 42.6 | 24.4 | 17.6 | 11.8 | 7.83 | 6.57 | 3.50 |
| 1.80 V | 176 | 105 | 68.5 | 41.5 | 24.0 | 17.5 | 11.5 | 7.77 | 6.50 | 3.48 |
| 1.85 V | 157 | 93.9 | 62.6 | 38.4 | 22.7 | 16.4 | 11.0 | 7.45 | 6.31 | 3.42 |

## Constant Power Discharge Characteristics Unit: W/cell $\left(25^{\circ} \mathrm{C}, 77^{\circ} \mathrm{F}\right)$

| FV/Time | 5 min | 15 min | 30 min | 1 h | 2 h | 3 h | 5 h |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.60 V | 384 | 217 | 135 | 82.7 | 47.5 | 34.7 | 23.2 |
| 1.65 V | 369 | 213 | 134 | 82.1 | 47.3 | 34.2 | 23.1 |
| 1.70 V | 367 | 210 | 134 | 81.5 | 47.1 | 34.0 | 22.9 |
| 1.75 V | 343 | 209 | 134 | 80.8 | 46.9 | 33.8 | 22.7 |
| 1.80 V | 315 | 198 | 130 | 80.2 | 46.8 | 33.7 | 22.5 |
| 1.85 V | 281 | 177 | 120 | 74.5 | 44.7 | 32.0 | 21.5 |

## I-EXRUN

Discharge characteristic


## The effect of temperature on capacity



Curves of self-discharge


Charging characteristic


The effect of discharge depth on cycle life


The effect of temperature on float life


