

# LECXO®

## LX2.3-12 (12V-2.3AH)

### RECHARGEABLE SEALED LEAD-ACID BATTERY



# LX-Series

MADE IN VIETNAM



UPS  
SYSTEM



GENERAL  
PURPOSE



EMERGENCY  
LIGHTING



MEDICAL



FIRE &  
SECURITY

### APPLICATIONS

- All purpose
- Uninterruptible Power Supply (UPS)
  - Electric Power System (EPS)
- Emergency backup power supply
  - Alarm and security system
- Communication power supply
  - DC power supply
  - Auto control system

### GENERAL FEATURES

- 7 years design life(25°C)
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
  - PbCaSn alloy for plate grids: less gassing, less self- discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- High purity raw material: ensure low self discharge rate

### STANDARDS

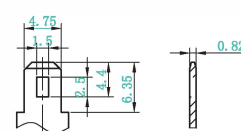
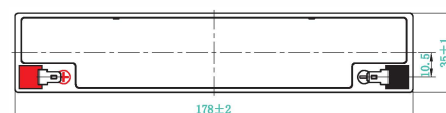
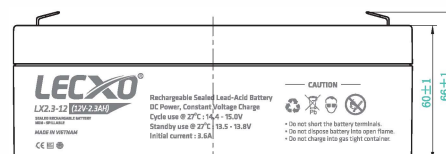
Compliance with & Manufacturing Facilities Certified by:

- ISO 45001, 9001 & 14001
- IEC 60896 Standard
- EU Battery Directive
  - UL Certified
  - CE Certified

### SPECIFICATIONS

|                               |                                                                                                         |                                                                                                                                                                        |
|-------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated Voltage                 |                                                                                                         | 12V                                                                                                                                                                    |
| Nominal Capacity              | 2.3Ah                                                                                                   | (C <sub>20</sub> 1.75 V/Cell)                                                                                                                                          |
| Dimension                     | Length                                                                                                  | 178±2mm (7.00inches)                                                                                                                                                   |
|                               | Width                                                                                                   | 35±1mm (1.68 inches)                                                                                                                                                   |
|                               | Container Height                                                                                        | 60±1mm (2.36 inches)                                                                                                                                                   |
|                               | Total Height                                                                                            | 66±1mm (2.60 inches)                                                                                                                                                   |
| Approx Weight                 |                                                                                                         | 0.97kg (2.14 lbs)                                                                                                                                                      |
| Terminal                      |                                                                                                         | T1                                                                                                                                                                     |
| Container Material            |                                                                                                         | ABS                                                                                                                                                                    |
| Rated Capacity (25°C)         | 2.30Ah                                                                                                  | (20hr, 0.175A, 1.75V/cell)                                                                                                                                             |
|                               | 2.16Ah                                                                                                  | (10hr, 0.331A, 1.75 V/cell)                                                                                                                                            |
|                               | 1.98Ah                                                                                                  | (5hr, 0.602A, 1.75 V/cell)                                                                                                                                             |
|                               | 1.76Ah                                                                                                  | (3hr, 0.872A, 1.75 V/cell)                                                                                                                                             |
|                               | 1.45Ah                                                                                                  | (1hr, 2.15A, 1.60 V/cell)                                                                                                                                              |
| Max. Discharge Current        |                                                                                                         | 35A (5s)                                                                                                                                                               |
| Internal Resistance (25°C)    |                                                                                                         | Approx 35m                                                                                                                                                             |
| Operating Temp. Range         | Discharge                                                                                               | -15~50°C (5~122°F)                                                                                                                                                     |
|                               | Charge                                                                                                  | 0~40°C (32~104°F)                                                                                                                                                      |
|                               | Storage                                                                                                 | -15~40°C (5~104°F)                                                                                                                                                     |
| National Operating Temp Range |                                                                                                         | 25±3°C (77±5°F)                                                                                                                                                        |
| Cycle Use                     | Initial Charging Current less than 3.6A Voltage 14.4V ~15.0V at 25°C (77°F) Temp. Coefficient - 30mV/°C |                                                                                                                                                                        |
|                               | Standby Use                                                                                             |                                                                                                                                                                        |
| Effect of Temp to Capacity    | Initial Charging Current less than 3.6A Voltage 13.5V ~13.8V at 25°C (77°F) Temp Coefficient - 20m V/°C |                                                                                                                                                                        |
|                               | 40°C (104°F)                                                                                            | 103%                                                                                                                                                                   |
|                               | 25°C (77°F)                                                                                             | 100%                                                                                                                                                                   |
|                               | 0°C (32°F)                                                                                              | 86%                                                                                                                                                                    |
| Self Discharge                |                                                                                                         | LX Series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperature the time interval will be shorter |

### DIMENSIONS



T1

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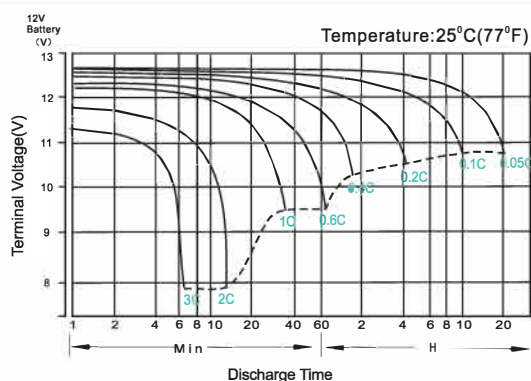


MEDICAL

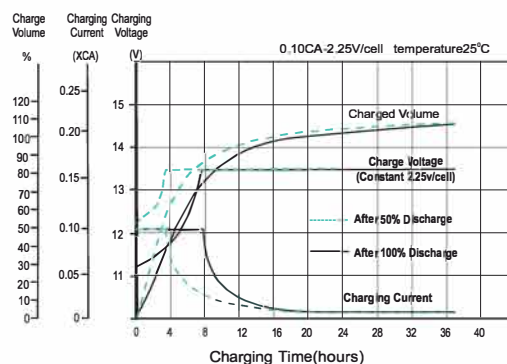


FIRE &  
SECURITY

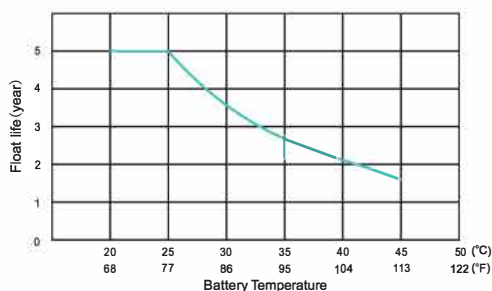
### DISCHARGE CHARACTERISTICS



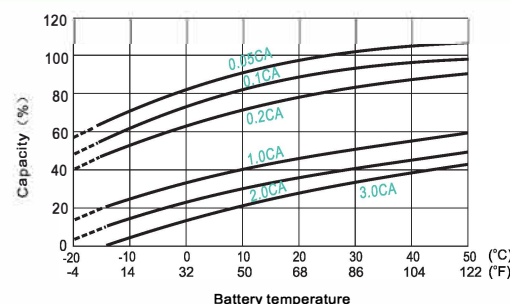
### FLOAT CHARGING CHARACTERISTICS



### FLOAT SERVICE LIFE



### TEMPERATURE EFFECTS IN RELATION TO BATTERY CAPACITY



### Constant Current Discharge (Amperes) at 25 °C (77°F)

| F.v/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 1.5h  | 2h    | 3h    | 4h    | 5h    | 6h    | 8h    | 10h   | 20h   |
|------------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.85V/cell | 6.10 | 4.48  | 3.56  | 2.90  | 2.16  | 1.62  | 1.32 | 0.989 | 0.792 | 0.569 | 0.453 | 0.385 | 0.329 | 0.259 | 0.211 | 0.113 |
| 1.80V/cell | 6.61 | 4.71  | 3.70  | 2.99  | 2.21  | 1.65  | 1.35 | 1.01  | 0.804 | 0.578 | 0.459 | 0.391 | 0.334 | 0.262 | 0.214 | 0.11  |
| 1.75V/cell | 7.14 | 4.94  | 3.83  | 3.08  | 2.27  | 1.69  | 1.37 | 1.02  | 0.817 | 0.587 | 0.466 | 0.396 | 0.338 | 0.265 | 0.216 | 0.115 |
| 1.70V/cell | 7.68 | 5.17  | 3.97  | 3.17  | 2.32  | 1.72  | 1.40 | 1.04  | 0.830 | 0.595 | 0.472 | 0.401 | 0.342 | 0.269 | 0.219 | 0.116 |
| 1.67V/cell | 7.99 | 5.31  | 4.05  | 3.23  | 2.35  | 1.74  | 1.41 | 1.05  | 0.838 | 0.600 | 0.476 | 0.404 | 0.345 | 0.271 | 0.221 | 0.117 |
| 1.60V/cell | 8.71 | 5.63  | 4.24  | 3.35  | 2.42  | 1.78  | 1.45 | 1.07  | 0.855 | 0.612 | 0.485 | 0.411 | 0.351 | 0.275 | 0.224 | 0.118 |

### Constant Power Discharge (Watts/cell) at 25 °C (77°F)

| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 1.5h | 2h   | 3h   | 4h    | 5h    | 6h    | 8h    | 10h   | 20h   |
|------------|------|-------|-------|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1.85V/cell | 11.6 | 8.58  | 6.83  | 5.58  | 4.17  | 3.14  | 2.58 | 1.93 | 1.55 | 1.12 | 0.892 | 0.761 | 0.652 | 0.514 | 0.420 | 0.225 |
| 1.80V/cell | 12.5 | 8.96  | 7.07  | 5.73  | 4.26  | 3.20  | 2.62 | 1.96 | 1.57 | 1.13 | 0.903 | 0.770 | 0.660 | 0.519 | 0.425 | 0.228 |
| 1.75V/cell | 13.4 | 9.35  | 7.28  | 5.88  | 4.34  | 3.25  | 2.65 | 1.98 | 1.59 | 1.15 | 0.914 | 0.779 | 0.667 | 0.525 | 0.430 | 0.229 |
| 1.70V/cell | 14.3 | 9.73  | 7.50  | 6.02  | 4.42  | 3.30  | 2.69 | 2.01 | 1.61 | 1.16 | 0.925 | 0.788 | 0.675 | 0.531 | 0.434 | 0.232 |
| 1.67V/cell | 14.8 | 9.96  | 7.64  | 6.11  | 4.47  | 3.33  | 2.71 | 2.03 | 1.62 | 1.17 | 0.931 | 0.793 | 0.679 | 0.535 | 0.437 | 0.232 |
| 1.60V/cell | 16.0 | 10.5  | 7.93  | 6.31  | 4.58  | 3.40  | 2.77 | 2.06 | 1.65 | 1.19 | 0.947 | 0.805 | 0.690 | 0.543 | 0.444 | 0.235 |