

### Specifications

#### Nominal Voltage(V)

12V

#### Nominal Power

15 mins rate: 215W/cell to 1.67V/cell

#### Nominal Capacity

|              |                   |         |
|--------------|-------------------|---------|
| 20 hour rate | (2.75A to 10.50V) | 55Ah    |
| 8 hour rate  | (5.39A to 10.50V) | 43Ah    |
| 5 hour rate  | (9.35A to 10.20V) | 46.75Ah |

#### Weight

Approx. 17.1kg(37.6Lbs.)

#### Internal Resistance (at 1KHz)

Approx. 6mΩ

#### Maximum Discharge Current for

5 seconds: 660A

#### Short Circuit Current (A)

2775 A

#### Charging Methods at 25°C(77°F)

|                            |                |
|----------------------------|----------------|
| Maximum Charging Current : | 16.5A          |
| Boost Charging Voltage     | 14.4 to 15.0V  |
| Boost Charge Time          | 8-9Hr          |
| Float Charging Voltage     | 13.5 to 13.8V  |
| Coefficient                | -3.0mV/°C/cell |

#### Operating Temperature Range

|           |             |    |              |
|-----------|-------------|----|--------------|
| Charge    | -15°C (5°F) | to | 40°C (104°F) |
| Discharge | -15°C (5°F) | to | 50°C (122°F) |
| Storage   | -15°C (5°F) | to | 40°C (104°F) |

#### Charge Retention (shelf life) at 20°C(68°F)

|         |     |
|---------|-----|
| 1 month | 98% |
| 3 month | 96% |
| 6 month | 94% |

#### Case Material

ABS UL94 HB  
Option: Flammability resistance of (UL94 V-0)

#### Battery Construction

| Component    | Positive Plate | Negative plate | Safety valve | Terminal | Separator  | Electrolyte   |
|--------------|----------------|----------------|--------------|----------|------------|---------------|
| Raw material | Lead dioxide   | Lead           | Rubber       | Lead     | Fiberglass | Sulfuric acid |



### Dimensions

#### Length (L)

226±2-1 (8.90±0.08-0.04)

#### Width (W)

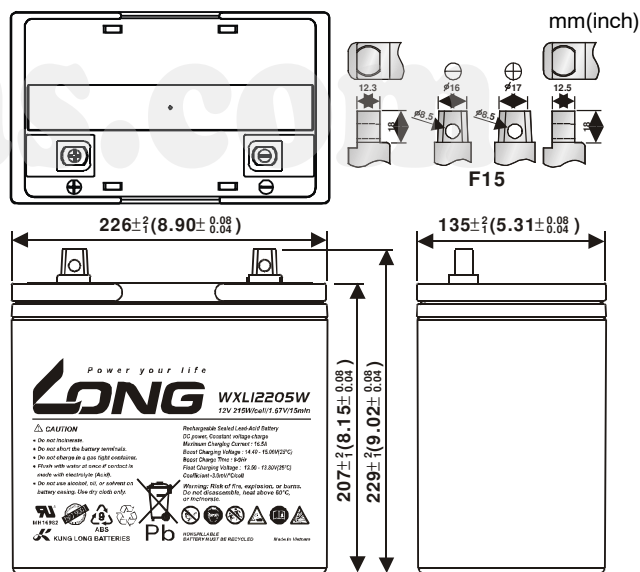
135±2-1 (5.21±0.08-0.04)

#### Height (H)

207±2-1 (8.15±0.08-0.04)

#### Overall Height (HT)

229±2-1 (9.02±0.08-0.04)



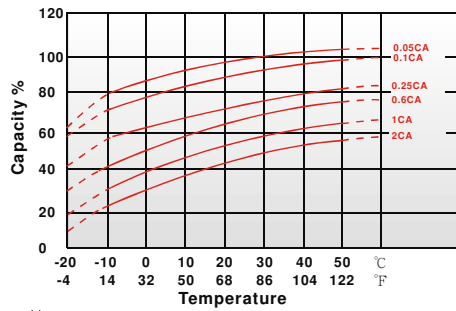
#### Terminal

F15

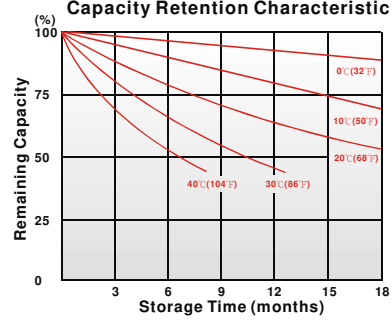
#### Design Life

Expected Trickle Design Life: 6-9 years at 20°C according to Eurobat.

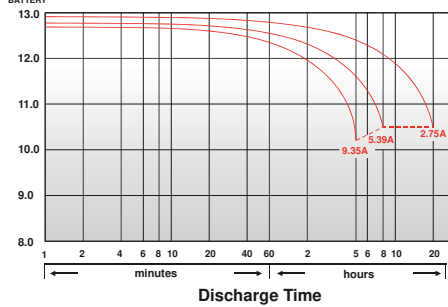
Effect of Temperature on Capacity 25°C(77°F)



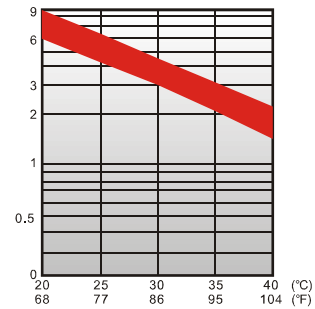
Capacity Retention Characteristic



Discharge Time VS. Discharge Current (25°C)



Trickle (or float) Service Life



### - PERFORMANCE DATA

#### Discharge Rates in Watts to Various End Voltages at 25°C(77°F)

| End Voltage |     | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| 2           | min | 334   | 397   | 429   | 454   | 473   | 490   | 504   |
| 4           | min | 309   | 345   | 374   | 399   | 418   | 435   | 449   |
| 5           | min | 300   | 336   | 365   | 390   | 414   | 431   | 445   |
| 6           | min | 276   | 302   | 324   | 343   | 358   | 373   | 388   |
| 8           | min | 261   | 283   | 301   | 318   | 333   | 348   | 363   |
| 10          | min | 221   | 246   | 266   | 284   | 298   | 305   | 311   |
| 15          | min | 196   | 211   | 222   | 225   | 228   | 231   | 233   |
| 20          | min | 169   | 177   | 182   | 186   | 189   | 192   | 195   |
| 30          | min | 119   | 124   | 128   | 131   | 135   | 138   | 140   |
| 45          | min | 93.1  | 96.0  | 98.0  | 98.9  | 99.6  | 100   | 101   |
| 60          | min | 65.0  | 67.4  | 69.6  | 71.6  | 72.1  | 72.4  | 72.6  |
| 90          | min | 51.1  | 53.0  | 54.5  | 55.2  | 55.7  | 56.1  | 56.4  |
| 120         | min | 33.3  | 35.5  | 37.1  | 37.7  | 38.3  | 38.7  | 39.1  |
| 180         | min | 26.8  | 28.7  | 29.7  | 30.2  | 30.6  | 30.9  | 31.2  |
| 240         | min | 21.9  | 22.9  | 23.8  | 24.2  | 24.5  | 24.7  | 24.9  |
| 300         | min | 18.4  | 19.3  | 20.1  | 20.3  | 20.5  | 20.7  | 20.9  |
| 600         | min | 10.7  | 11.1  | 11.5  | 11.6  | 11.8  | 12.0  | 12.1  |
| 1200        | min | 5.51  | 5.75  | 5.96  | 6.04  | 6.09  | 6.14  | 6.19  |

#### - Discharge Rates in Amperes to Various End Voltages at 25°C(77°F)

| End Voltage |     | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| 2           | min | 183   | 232   | 259   | 275   | 289   | 301   | 310   |
| 4           | min | 177   | 207   | 226   | 242   | 256   | 269   | 277   |
| 5           | min | 158   | 182   | 196   | 209   | 218   | 226   | 231   |
| 6           | min | 139   | 162   | 173   | 187   | 199   | 209   | 216   |
| 8           | min | 128   | 147   | 159   | 163   | 167   | 171   | 174   |
| 10          | min | 117   | 136   | 147   | 152   | 158   | 162   | 164   |
| 15          | min | 91.3  | 101   | 105   | 110   | 114   | 116   | 118   |
| 20          | min | 77.6  | 85.8  | 89.6  | 93.6  | 96.9  | 98.6  | 100   |
| 30          | min | 57.9  | 63.1  | 65.7  | 67.4  | 69.2  | 70.7  | 71.6  |
| 45          | min | 46.7  | 47.6  | 48.2  | 48.9  | 49.5  | 50.0  | 50.4  |
| 60          | min | 29.2  | 32.5  | 34.3  | 34.9  | 35.4  | 35.8  | 36.2  |
| 90          | min | 23.1  | 24.7  | 25.4  | 26.0  | 26.5  | 26.9  | 27.0  |
| 120         | min | 16.8  | 18.1  | 19.1  | 19.5  | 19.9  | 20.2  | 20.4  |
| 180         | min | 12.7  | 13.5  | 14.0  | 14.3  | 14.5  | 14.7  | 14.9  |
| 240         | min | 10.8  | 11.2  | 11.6  | 11.8  | 12.0  | 12.2  | 12.4  |
| 300         | min | 8.95  | 9.34  | 9.53  | 9.64  | 9.80  | 9.89  | 10.0  |
| 600         | min | 5.30  | 5.41  | 5.51  | 5.56  | 5.62  | 5.68  | 5.73  |
| 1200        | min | 2.74  | 2.78  | 2.81  | 2.84  | 2.88  | 2.91  | 2.94  |

All data on the spec. sheet is an average value:

The tolerance range :  $X < 6\text{min}$ (+15%~-15%),  $6\text{min} \leq X < 10\text{min}$ (+12%~-12%),  $10\text{min} \leq X < 60\text{min}$ (+8%~-8%),  $X \geq 60\text{min}$ (+5%~-5%)

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