

⚡ Specifications

Nominal Voltage(V)

12V

Nominal Power

15 mins rate: 205W/cell to 1.67V/cell

Nominal Capacity

| | | |
|--------------|-------------------|---------|
| 20 hour rate | (2.75A to 10.50V) | 55Ah |
| 8 hour rate | (5.9A to 10.50V) | 47.2Ah |
| 5 hour rate | (9.35A to 10.20V) | 46.75Ah |

Weight

Approx. 17.1kg(37.6Lbs.)

Internal Resistance (at 1KHz)

Approx. 8mΩ

Maximum Discharge Current for

5 seconds: 660A

Short Circuit Current (A) IEC 60896-21-22

1500 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 | AGM | Sulfuric acid |



⚡ Dimensions

Length (L)

226±²₁ (8.90±^{0.08}_{0.04})

Width (W)

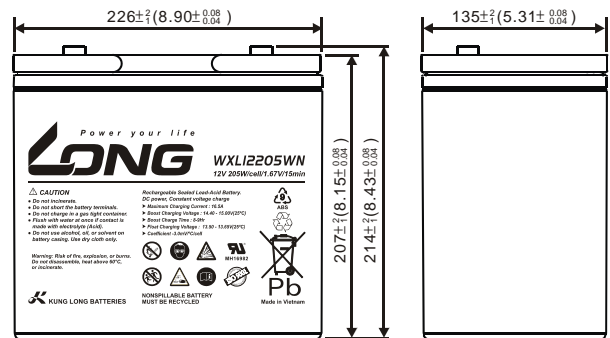
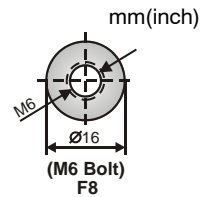
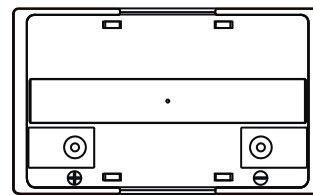
135±²₁ (5.21±^{0.08}_{0.04})

Height (H)

207±²₁ (8.15±^{0.08}_{0.04})

Overall Height (HT)

214±²₁ (8.43±^{0.08}_{0.04})



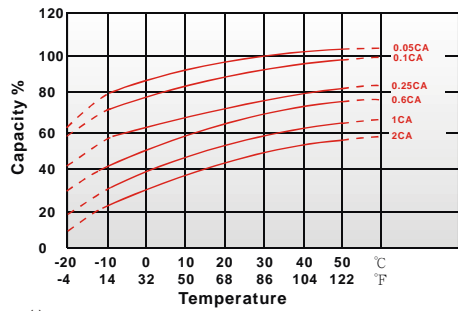
Terminal

F8
Recommended torque value M6: 7 N-m (71 kgf-cm)
Maximum allowable torque value M6: 10N-m (102kgf-cm)

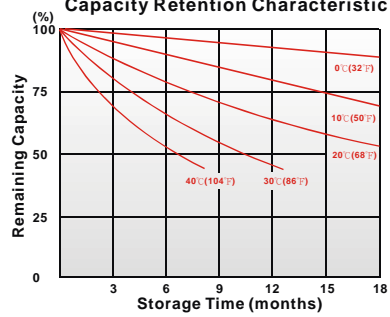
Design Life

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

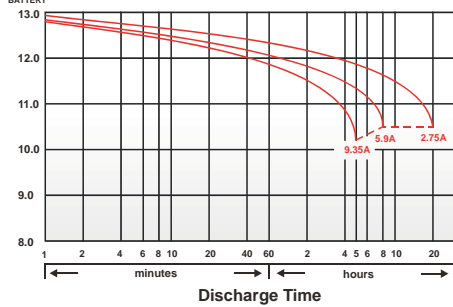
Effect of Temperature on Capacity 25°C (77°F)



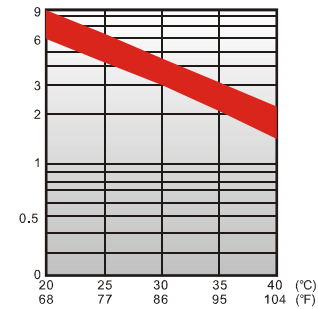
Capacity Retention Characteristic



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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