

⚡ Specifications

Nominal Voltage(V)

12V

Nominal Capacity

| | | | | |
|--------------|--------|----|---------|---------|
| 10 hour rate | (13A | to | 10.80V) | 130Ah |
| 5 hour rate | (22.1A | to | 10.20V) | 110.5Ah |
| 1 hour rate | (78A | to | 9.60V) | 78Ah |

Weight

Approx. 42.6kg(93.7Lbs.)

Internal Resistance (at 1KHz)

Approx. 5 mΩ

Maximum Discharge Current for

5 seconds: 1300A

Charging Methods at 25°C(77°F)

| | |
|----------------------------|----------------|
| Maximum Charging Current : | 39A |
| Standby use: | |
| 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 | 94% |
| 6 month | 85% |

Case Material

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

Design Life & Standard

Expected Trickle Design Life: 10-12 years at 20°C according to Eurobat.

Terminal

F18



⚡ Dimensions

Length (L) 483±3 (19.02±0.12)

Width (W) 170±3 (6.69±0.12)

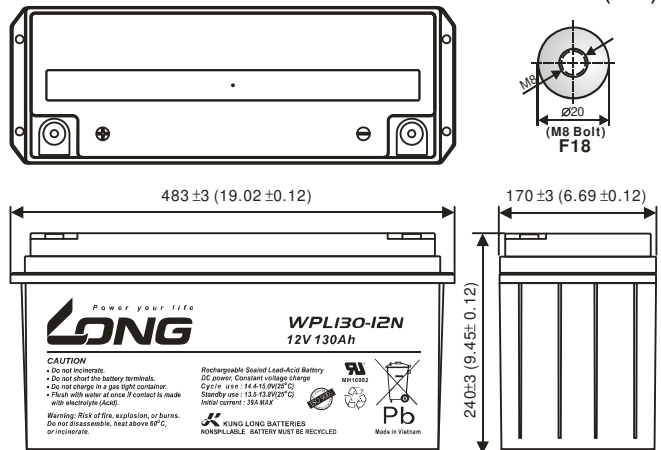
Height (H) 240±3 (9.45±0.12)

Overall Height (HT) 240±3 (9.45±0.12)

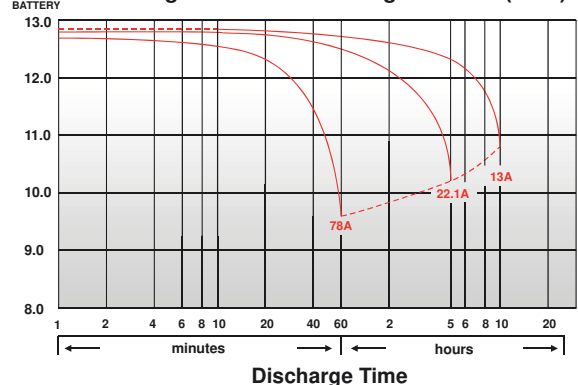
Description of torque value of hard ware for the terminals:

| | |
|--------------------------------|-----------------------|
| Recommended torque value | M8:12 N-m (122kgf-cm) |
| Maximum allowable torque value | M8:20 N-m (204kgf-cm) |

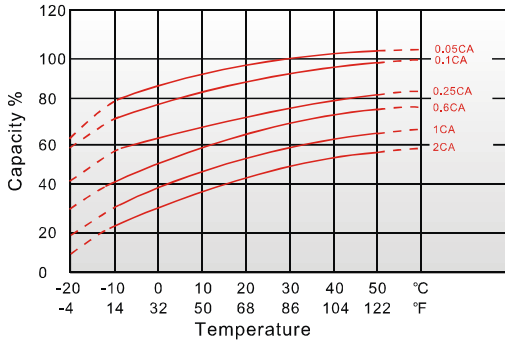
mm(inch)



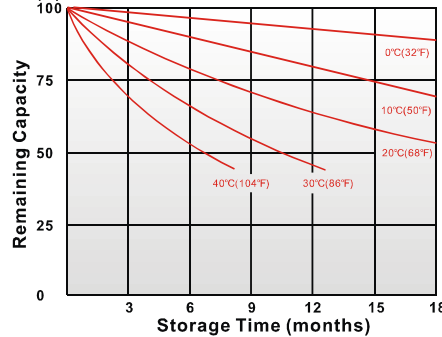
(V) FOR 12V BATTERY Discharge Time VS. Discharge Current (25°C)



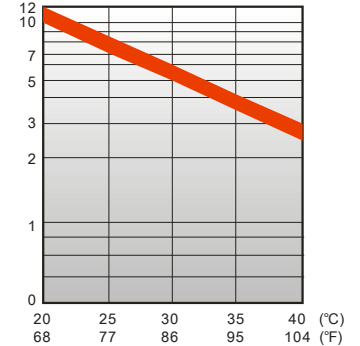
Effect of Temperature on Capacity 25°C(77°F)



Capacity Retention Characteristic



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 |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| 5 | min | 425 | 442 | 537 | 580 | 614 | 633 | 673 |
| 10 | min | 315 | 368 | 450 | 472 | 497 | 510 | 533 |
| 15 | min | 307 | 345 | 357 | 371 | 388 | 396 | 411 |
| 20 | min | 275 | 289 | 301 | 315 | 327 | 333 | 345 |
| 30 | min | 221 | 230 | 237 | 245 | 253 | 257 | 264 |
| 60 | min | 142 | 144 | 147 | 149 | 152 | 153 | 156 |
| 90 | min | 115 | 121 | 123 | 125 | 125 | 126 | 127 |
| 120 | min | 92.2 | 96.5 | 98.4 | 100 | 100 | 100 | 101 |
| 180 | min | 61.8 | 64.7 | 66.0 | 66.8 | 67.1 | 67.3 | 67.8 |
| 240 | min | 51.3 | 53.6 | 54.7 | 55.3 | 55.6 | 55.8 | 56.1 |
| 300 | min | 43.1 | 45.1 | 46.0 | 46.5 | 46.7 | 46.9 | 47.2 |
| 480 | min | 29.3 | 30.6 | 31.2 | 31.6 | 31.7 | 31.8 | 32.0 |
| 600 | min | 24.6 | 25.7 | 26.3 | 26.6 | 26.7 | 26.7 | 26.9 |
| 1200 | min | 13.3 | 13.9 | 14.2 | 14.3 | 14.4 | 14.4 | 14.5 |

- 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 |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| 5 | min | 225 | 255 | 310 | 335 | 358 | 368 | 389 |
| 10 | min | 180 | 210 | 253 | 270 | 284 | 291 | 304 |
| 15 | min | 170 | 192 | 194 | 204 | 213 | 218 | 226 |
| 20 | min | 150 | 158 | 164 | 172 | 178 | 182 | 188 |
| 30 | min | 114 | 119 | 123 | 127 | 131 | 133 | 137 |
| 60 | min | 71.7 | 72.8 | 74.0 | 75.3 | 76.4 | 77.3 | 78.7 |
| 90 | min | 58.0 | 60.8 | 62.0 | 62.7 | 63.1 | 63.3 | 63.8 |
| 120 | min | 46.3 | 48.5 | 49.4 | 50.0 | 50.3 | 50.4 | 50.8 |
| 180 | min | 30.9 | 32.4 | 33.0 | 33.4 | 33.6 | 33.7 | 33.9 |
| 240 | min | 25.5 | 26.7 | 27.2 | 27.6 | 27.7 | 27.8 | 28.0 |
| 300 | min | 21.5 | 22.5 | 22.9 | 23.2 | 23.3 | 23.3 | 23.5 |
| 480 | min | 14.6 | 15.2 | 15.5 | 15.7 | 15.8 | 15.8 | 15.9 |
| 600 | min | 12.2 | 12.8 | 13.1 | 13.2 | 13.3 | 13.3 | 13.4 |
| 1200 | min | 6.60 | 6.89 | 7.04 | 7.12 | 7.14 | 7.16 | 7.19 |

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

The tolerance range : X<6min(+15%~-15%), 6min ≤ X<10min(+12%~-12%), 10min ≤ X < 60min(+8%~-8%), X ≥ 60min(+5%~-5%)

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