Power your life

# High Temperature Batteries

# HTP50-12N

## Specifications

### Nominal Voltage(V)

12V

### Nominal Capacity

| | | | | |
|---|---|---|---|---|
| 10 hour rate | (4.75A | to | 10.50V) | 47.5Ah |
| 5 hour rate | (8.5A | to | 10.20V) | 42.5Ah |
| 1 hour rate | (30A | to | 9.60V) | 30Ah |
| 1 C | (50A | to | 9.60V) | 28.33Ah |

### Weight

Approx. 14.8kg(32.56Lbs.)

### Internal Resistance (at 1KHz)

Approx. 6 mΩ

### Maximum Discharge Current for

5 seconds: 600A

### Charging Methods at 25℃(77℉)

| | |
|---|---|
| Maximum Charging Current： | 15A |
| Boost Charging Voltage | 14.1 to 14.4V |
| Boost Charge Time | 8-9Hr |
| Float Charging Voltage | 13.5 to 13.65V |
| Coefficient -3.0mV/℃/cell | |

### Operating Temperature Range

| | | | |
|---|---|---|---|
| Charge | -15℃(5℉) | to | 45℃(113℉) |
| Discharge | -15℃(5℉) | to | 50℃(122℉) |
| Storage | -15℃(5℉) | to | 40℃(104℉) |

### Charge Retention (shelf life) at 20℃(68℉)

| | |
|---|---|
| 1 month | 98% |
| 3 month | 94% |
| 6 month | 85% |

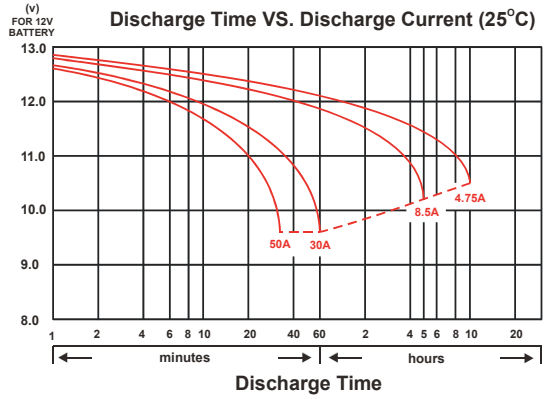
### Case Material

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

### Design Life

EUROBAT(20℃): 3-5 YEARS STANDARD COMMERCIAL

### Discharge Time VS. Discharge Current (25℃)



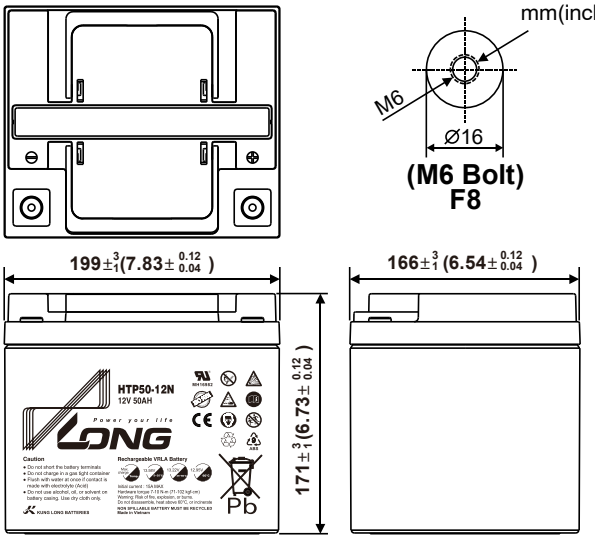

## Dimensions

| | |
|---|---|
| **Length (L)** | $199\pm^{3}_{1}(7.83\pm^{0.12}_{0.04})$ |
| **Width (W)** | $166\pm^{3}_{1}(6.54\pm^{0.12}_{0.04})$ |
| **Height (H)** | $171\pm^{3}_{1}(6.73\pm^{0.12}_{0.04})$ |
| **Overall Height (HT)** | $171\pm^{3}_{1}(6.73\pm^{0.12}_{0.04})$ |
| **Terminal** | F8 |

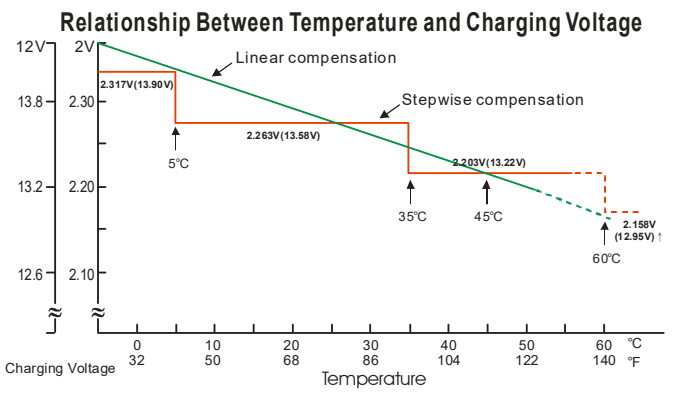
### Description of torque value of hardware for the terminals:

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

mm(inch)




### Relationship Between Temperature and Charging Voltage



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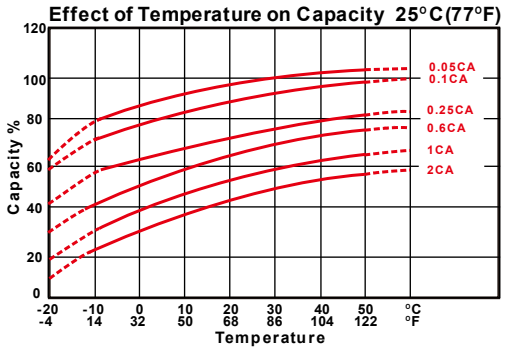


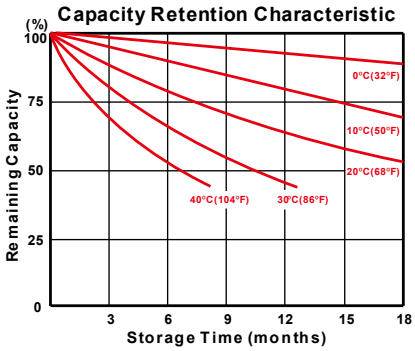


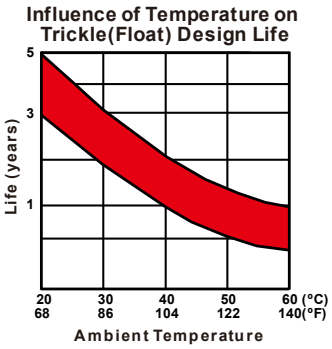


## - PERFORMANCE DATA

### Discharge Rates in Watts to Various End Voltages at 25℃(77℉)

| Time \ End Voltage | | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|---|---|---|---|---|---|---|---|---|
| 10 | min | 168 | 199 | 218 | 228 | 232 | 237 | 241 |
| 15 | min | 124 | 143 | 157 | 163 | 166 | 169 | 171 |
| 30 | min | 76.4 | 88.0 | 95.2 | 98.3 | 99.5 | 101 | 102 |
| 60 | min | 52.6 | 55.4 | 57.0 | 58.3 | 58.8 | 59.5 | 59.9 |
| 120 | min | 29.2 | 32.0 | 33.3 | 34.5 | 34.8 | 35.3 | 35.8 |
| 180 | min | 20.8 | 22.7 | 23.8 | 24.7 | 25.0 | 25.3 | 25.7 |
| 240 | min | 17.2 | 18.3 | 19.0 | 19.7 | 19.8 | 20.2 | 20.5 |
| 300 | min | 15.9 | 16.6 | 17.0 | 17.3 | 17.5 | 17.7 | 17.8 |
| 600 | min | 8.62 | 9.10 | 9.38 | 9.57 | 9.62 | 9.68 | 9.77 |
| 1200 | min | 4.58 | 4.87 | 5.05 | 5.17 | 5.20 | 5.25 | 5.30 |

### - Discharge Rates in Amperes to Various End Voltages at 25℃(77℉)

| Time \ End Voltage | | 1.85V | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
|---|---|---|---|---|---|---|---|---|
| 10 | min | 86.7 | 104 | 115 | 123 | 125 | 128 | 131 |
| 15 | min | 76.2 | 82.8 | 85.8 | 88.4 | 89.1 | 90.0 | 91.0 |
| 30 | min | 44.5 | 49.7 | 51.7 | 53.3 | 53.8 | 54.4 | 55.1 |
| 60 | min | 25.5 | 28.2 | 29.3 | 30.0 | 30.2 | 30.5 | 30.8 |
| 120 | min | 15.1 | 16.2 | 16.8 | 17.3 | 17.5 | 17.7 | 17.9 |
| 180 | min | 11.0 | 11.7 | 12.1 | 12.4 | 12.5 | 12.6 | 12.7 |
| 240 | min | 8.96 | 9.44 | 9.70 | 9.89 | 9.96 | 10.1 | 10.2 |
| 300 | min | 7.85 | 8.26 | 8.50 | 8.67 | 8.73 | 8.80 | 8.87 |
| 600 | min | 4.41 | 4.65 | 4.76 | 4.82 | 4.84 | 4.87 | 4.91 |
| 1200 | min | 2.32 | 2.44 | 2.50 | 2.55 | 2.57 | 2.59 | 2.61 |

**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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