

# CHT7-12

12V 7AH

High Temperature Battery

# CANBAT

## CHT7-12



## Physical Specification

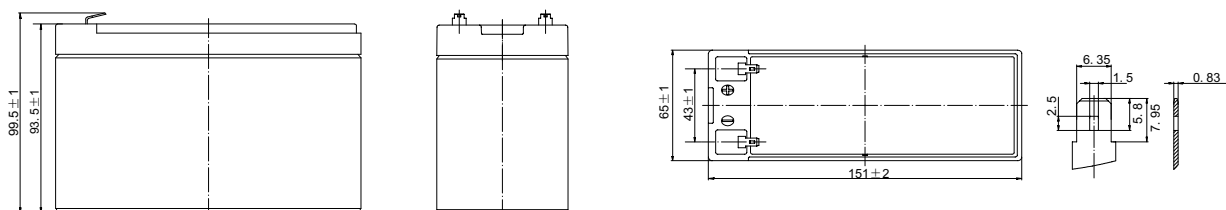
|                               |                           |
|-------------------------------|---------------------------|
| Part Number:                  | CHT7-12                   |
| Length:                       | 151 ± 2 mm (5.95 inches)  |
| Width:                        | 65 ± 2 mm (2.56 inches)   |
| Container Height:             | 93.5 ± 2 mm (3.68 inches) |
| Total Height (with terminal): | 99.5 ± 2 mm (3.92 inches) |
| Approx Weight:                | 2.45 kg (5.4 lbs)         |

## Specifications

|                              |                                                                                                                                                                                   |                                                                                                         |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                              | Nominal Voltage                                                                                                                                                                   | 12V                                                                                                     |
|                              | Nominal Capacity (20HR)                                                                                                                                                           | 7AH                                                                                                     |
| Terminal Type                | Standard Terminal                                                                                                                                                                 | T1                                                                                                      |
|                              | Optional Terminal                                                                                                                                                                 | T2                                                                                                      |
| Container Material           | Standard Option                                                                                                                                                                   | ABS(High Temperature Resistant Material)                                                                |
|                              | Flame Retardant Option (FR)                                                                                                                                                       | ABS (UL94:VO)                                                                                           |
| Rated Capacity               | C20(0.35A, 1.80V/cell)                                                                                                                                                            | 7.0 Ah                                                                                                  |
|                              | C10(0.651A, 1.80V/cell)                                                                                                                                                           | 6.51 Ah                                                                                                 |
|                              | C5(1.19A, 1.75V/cell)                                                                                                                                                             | 5.95 Ah                                                                                                 |
|                              | C3(1.79A, 1.75V/cell)                                                                                                                                                             | 5.37 Ah                                                                                                 |
|                              | C1(4.30A, 1.67V/cell)                                                                                                                                                             | 4.30Ah                                                                                                  |
| Max Discharge Current        | 105A (5s)                                                                                                                                                                         |                                                                                                         |
| Internal Resistance          | Approx 23mΩ                                                                                                                                                                       |                                                                                                         |
| Discharge Characteristics    | Operating Temp. Range                                                                                                                                                             | The battery can operate at temperatures of -40C ~ +65C. Extreme temperature can be up to 80C.           |
|                              | Nominal Operating Temp. Range                                                                                                                                                     | 25 ± 3°C (77 ± 5°F)                                                                                     |
|                              | Cycle Use                                                                                                                                                                         | Initial Charging Current less than 2.1A.Voltage 14.1V ~ 14.4V at 25°C (77°F) Temp. Coefficient -30mV/°C |
|                              | Standby Use                                                                                                                                                                       | Initial Charging Current less than 2.1A.Voltage 13.5V at 25°C (77°F) Temp. Coefficient -20mV/°C         |
|                              | Capacity affected by Temperature                                                                                                                                                  | 40°C (104°F) 103%                                                                                       |
|                              |                                                                                                                                                                                   | 25°C (77°F) 100%                                                                                        |
|                              |                                                                                                                                                                                   | 0°C (32°F) 79%                                                                                          |
| Design Floating Life at 20°C | 5 Years                                                                                                                                                                           |                                                                                                         |
| Self Discharge               | Canbat High Temperature Batteries may be stored for up to 6 months at 25°C(77F) and then a refresh charge is required. For higher temperatures the time interval will be shorter. |                                                                                                         |

## Dimensions

### T1 Terminal



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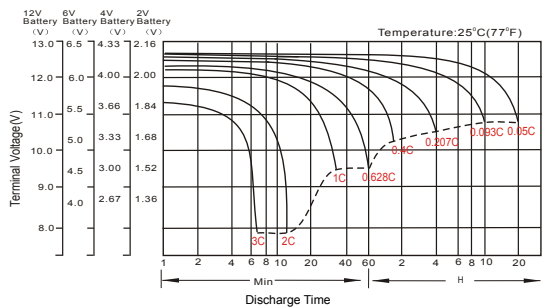
### Constant Current Discharge (Amperes) at 35 °C (95°F)

| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 8h    | 10h   | 20h   |
|------------|------|-------|-------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
| 1.85V/cell | 13.3 | 10.2  | 8.48  | 7.33  | 5.67  | 4.18  | 3.52 | 2.08 | 1.63 | 1.32 | 1.08 | 0.94 | 0.756 | 0.631 | 0.347 |
| 1.80V/cell | 17.9 | 13.1  | 10.2  | 8.67  | 6.69  | 4.86  | 3.94 | 2.27 | 1.75 | 1.41 | 1.16 | 1.01 | 0.802 | 0.651 | 0.350 |
| 1.75V/cell | 20.2 | 14.4  | 11.2  | 9.32  | 6.94  | 5.04  | 4.13 | 2.36 | 1.79 | 1.45 | 1.19 | 1.03 | 0.816 | 0.669 | 0.354 |
| 1.70V/cell | 22.2 | 15.7  | 11.9  | 9.80  | 7.23  | 5.24  | 4.21 | 2.42 | 1.83 | 1.48 | 1.22 | 1.05 | 0.827 | 0.682 | 0.360 |
| 1.67V/cell | 23.8 | 16.9  | 12.8  | 10.4  | 7.62  | 5.55  | 4.30 | 2.51 | 1.91 | 1.54 | 1.26 | 1.08 | 0.855 | 0.701 | 0.371 |
| 1.60V/cell | 27.0 | 18.4  | 13.6  | 11.1  | 8.05  | 5.60  | 4.40 | 2.56 | 1.97 | 1.58 | 1.30 | 1.10 | 0.848 | 0.704 | 0.367 |

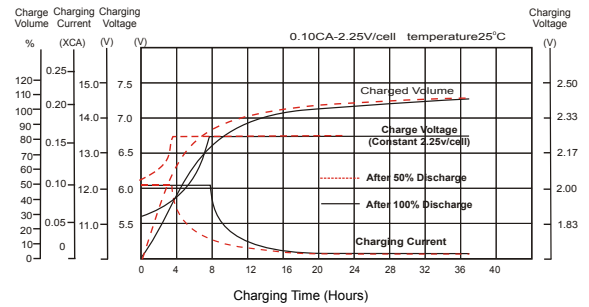
### Constant Power Discharge (Watts/cell) at 35 °C (95°F)

| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 8h    | 10h   | 20h   |
|------------|------|-------|-------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
| 1.85V/cell | 24.4 | 18.9  | 15.8  | 13.8  | 10.8  | 8.03  | 6.79 | 4.04 | 3.18 | 2.59 | 2.12 | 1.84 | 1.492 | 1.250 | 0.686 |
| 1.80V/cell | 32.4 | 23.9  | 18.9  | 16.1  | 12.6  | 9.26  | 7.57 | 4.38 | 3.40 | 2.75 | 2.26 | 1.97 | 1.578 | 1.286 | 0.692 |
| 1.75V/cell | 35.7 | 25.8  | 20.3  | 17.2  | 12.9  | 9.52  | 7.88 | 4.53 | 3.45 | 2.8  | 2.31 | 2.02 | 1.602 | 1.319 | 0.698 |
| 1.70V/cell | 38.2 | 27.5  | 21.4  | 17.9  | 13.4  | 9.86  | 8.10 | 4.63 | 3.54 | 2.87 | 2.37 | 2.05 | 1.622 | 1.345 | 0.710 |
| 1.67V/cell | 40.6 | 29.3  | 22.7  | 18.9  | 14.0  | 10.3  | 8.31 | 4.77 | 3.66 | 2.97 | 2.43 | 2.11 | 1.673 | 1.387 | 0.732 |
| 1.60V/cell | 44.8 | 31.2  | 23.8  | 19.9  | 14.7  | 10.40 | 8.26 | 4.85 | 3.76 | 3.04 | 2.50 | 2.13 | 1.656 | 1.383 | 0.722 |

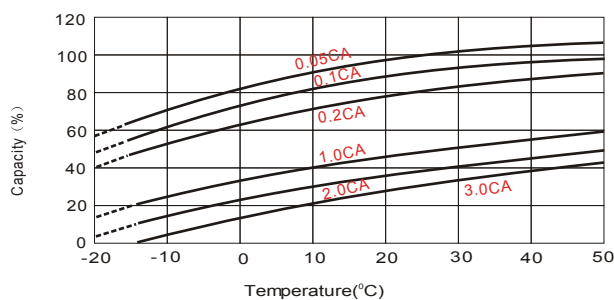
### Discharge Characteristics



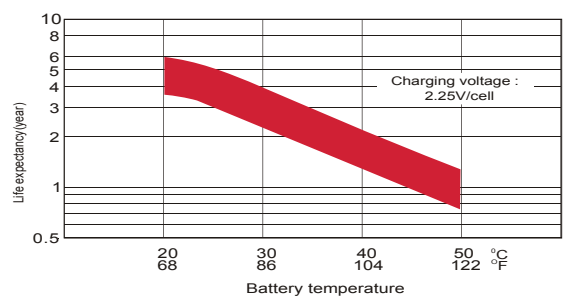
### Float Charging Characteristics



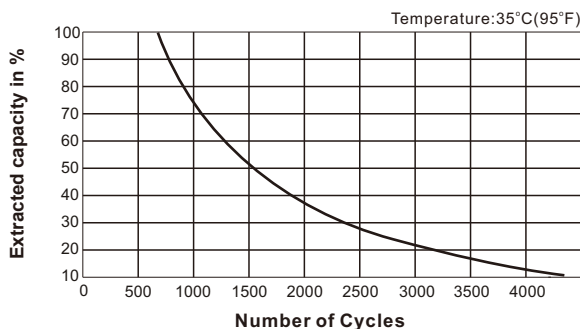
### Temperature Effects in Relation to Battery Capacity



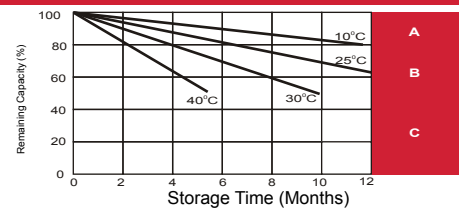
### Effect of Temperature on Long Term Float Life



### Cycle Life in Relation to Depth of Discharge



### Self Discharge Characteristics



- A** No supplementary required  
(Carryout supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:  
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.25V/cell.  
3. Charged for 8 ~ 10 hours at limited current 0.05 CA.
- C** Supplementary charge may often fail to recover the capacity.  
The battery should never be left standing till this is reached.

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