# Tubular Gel Battery

## 5 OPzV350 (2V350AH)

## Specification

| | | |
|---|---|---|
| Nominal Voltage | 2V | |
| Capacity | 350.0Ah@10hr to 1.80V/cell | |
| Dimension | Length | 145±2mm (5.17 inches) |
| | Width | 206±3mm (8.11 inches) |
| | Container Height | 471±3mm (18.5 inches) |
| | Total Height (with Terminal) | 506±3mm (19.9 inches) |
| Approx Weight | Approx 29.0 kg (63.9lbs) | |
| Container Material | ABS | |
| Rated Capacity | 350 AH/35.0A | (10hr,1.80V/cell,20°C/68°F) |
| | 305 AH/61.0A | (5hr,1.75V/cell,20°C/68°F) |
| | 270.4 AH/90.1A | (3hr,1.75V/cell,20°C/68°F) |
| | 199 AH/199A | (1hr,1.60V/cell,20°C/68°F) |
| Max. Discharge Current | 2800A (5s) | |
| Internal Resistance | Approx 0.9mΩ | |
| Operating Temp.Range | Discharge : -20～55°C (-4～131°F)<br>Charge : 0～40°C (32～104°F )<br>Storage : -20～50°C (-4～122°F) | |
| Cycle Use | Initial Charging Current less than 70.0A.Voltage 2.40V~2.50V at 20°C(68°F)Temp. Coefficient -5mV/°C | |
| Standby Use | No limit on Initial Charging Current Voltage 2.25V~2.30V at 20°C(68°F)Temp. Coefficient -3mV/°C | |
| Self-discharge | <2% pre month @ 20°C(68°F) | |


## Applications

- *Solar energy, wind energy*
- *Electric power, nuclear power*
- *Communication*
- *Ship, maritime affairs*
- *UPS, medical facilities and emergency lighting*
- *Situation with high environmental protection and energy-saving*
- *Better safety performance and reliability*
- *Designed service life of 20 years*

## Main Technical Advantages

- Plate: positive plate adopts tubular plate which can prevent active material falling, and adopts multi-component alloy frame. have fine corrosion-resisting performance and long service life. Negative plate adopts special radiated structure.
- Separator: adopt special micro-pore PVC-$SiO_2$ separator from Europe AMER-SIL Company, separator have big porosity and low resistance.
- Electrolyte: adopts Germany gas silicon dioxide, electrolyte in gel state in the battery without flowing, leakage and lamination can be avoided.
- Safety valve: adopt Germany technology, constant opening and closing, accumulator case expansion, damage and electrolyte dry up can be avoided.

### Constant Current Discharge (Amperes) at 20 °C (68°F )

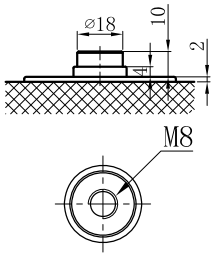
| F.V/Time | 10min | 15min | 30min | 1h | 2h | 3h | 5h | 8h | 10h |
|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 274 | 253 | 206 | 157 | 105 | 81.0 | 55.5 | 38.7 | 32.8 |
| 1.80V/cell | 337 | 306 | 240 | 176 | 115 | 88.1 | 59.8 | 41.4 | 35.0 |
| 1.75V/cell | 399 | 343 | 256 | 183 | 119 | 90.1 | 61.0 | 42.1 | 35.6 |
| 1.70V/cell | 448 | 374 | 271 | 191 | 122 | 91.9 | 61.9 | 42.7 | 36.0 |
| 1.65V/cell | 481 | 395 | 282 | 196 | 124 | 93.6 | 62.9 | 43.2 | 36.3 |
| 1.60V/cell | 503 | 409 | 289 | 199 | 126 | 94.7 | 63.5 | 43.5 | 36.6 |

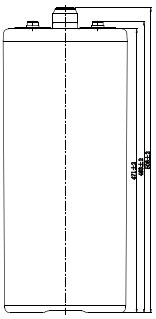
### Constant Power Discharge (Watts) at 20 °C (68°F )

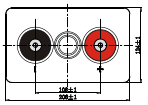
| F.V/Time | 10min | 15min | 30min | 1h | 2h | 3h | 5h | 8h | 10h |
|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 510 | 475 | 394 | 303 | 204 | 158 | 109 | 76.7 | 65.2 |
| 1.80V/cell | 616 | 567 | 455 | 339 | 223 | 171 | 117 | 82.0 | 69.5 |
| 1.75V/cell | 717 | 626 | 480 | 350 | 228 | 174 | 119 | 83.2 | 70.5 |
| 1.70V/cell | 790 | 673 | 503 | 362 | 233 | 177 | 121 | 84.1 | 71.2 |
| 1.65V/cell | 833 | 700 | 518 | 369 | 237 | 180 | 122 | 84.9 | 71.8 |
| 1.60V/cell | 855 | 715 | 526 | 373 | 239 | 181 | 123 | 85.3 | 72.2 |

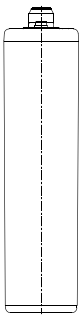
## Dimensions

### T11 Terminal

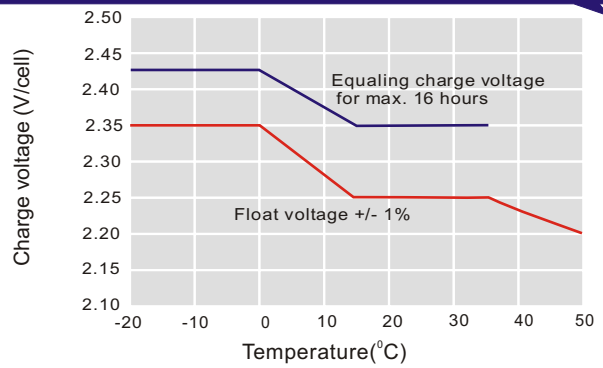




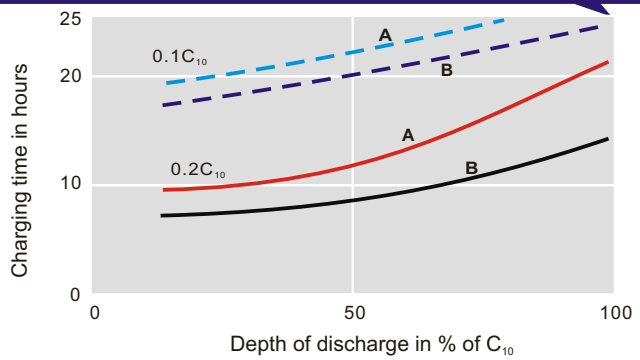


## Discharge Characteristics



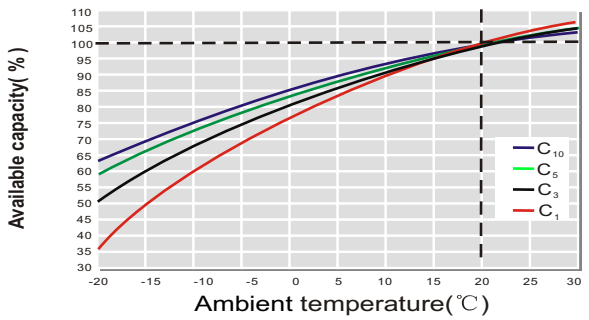

For continuous charging we recommend a voltage of 2.25 V.
The charging voltage must be compensated to the curve for a continuously different battery ambient temperature.

## Charging Characteristics

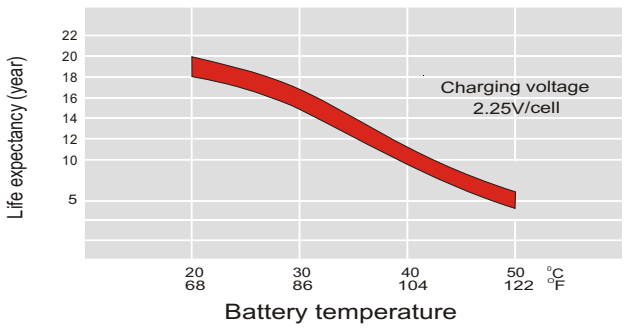



Charge voltage:
A—2.25 V/cell B—2.40 V/cell
State of charge 100 % State of charge 90 %

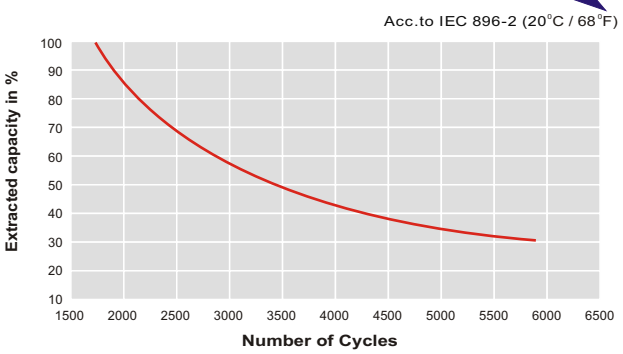
## Temperature Effects in Relation to Battery Capacity



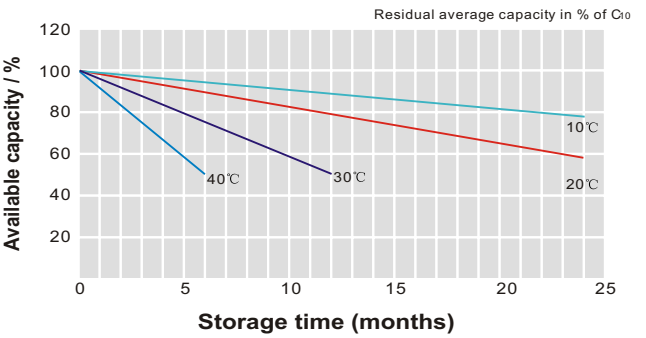

## Effect of Temperature on Long Term Float Life




## Cycle Life in Relation to Depth of Discharge




## General Relation of Capacity VS. Storage Time




## Sales Office


### China sales office:

Add:5th Floor,Xinbaohui Bldg.,Nanhai Blvd.,
Nanshan,Shenzhen, China. 518052
Tel:+ 86-755-86036060 (100 lines)
Fax: +86-755-26067269
E-mail:export@leoch.com

### North America sales office:

Add: 19751 Descartes, Unit A,
Foothill Ranch, CA 92610, USA
Tel: 949-588-5853
Fax: 949-588-5966
E-mail: sales@leoch.us

### Europe sales office:

Add: 9B Wheatstone Park, Waterwells
Business Park, Gloucester, GL2 2AQ. UK.
Tel: +44(0) 1452 729428
Fax: +44 (0)1452-690125
E-mail: Sales.Europe@leoch.com