



# Solar Series-Tubular Gel 12 OPzV1200(2V1680Ah)

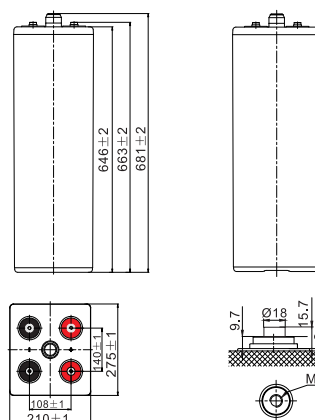


## Specifications

|                               |                       |                                 |
|-------------------------------|-----------------------|---------------------------------|
| Rated Voltage                 | 2V                    |                                 |
| Nominal Capacity              | 1680Ah                | (C <sub>100</sub> , 1.80V/cell) |
| Dimension                     | Length                | 275mm(10.83 in.)                |
|                               | Width                 | 210mm(8.27 in.)                 |
|                               | Container Height      | 646mm(25.43 in.)                |
|                               | Total Height          | 681mm(26.81 in.)                |
| Approx Weight                 | 93.0Kg (205.03 lbs)   |                                 |
| Terminal                      | M8                    |                                 |
| Container Material            | ABS                   |                                 |
| Rated Capacity (25°C)         | 1728.0 Ah             | (120hr, 14.4A, 1.80V/cell)      |
|                               | 1680.0 Ah             | (100hr, 16.8A, 1.80V/cell)      |
|                               | 1605.6 Ah             | (72hr, 22.3A, 1.80V/cell)       |
|                               | 1344.0 Ah             | (10hr, 134.4A, 1.80V/cell)      |
| Max. Discharge Current (5s)   | 9600A                 |                                 |
| Internal Resistance(25°C)     | Approx.0.43mΩ         |                                 |
| Operating Temp.Range          | Discharge             | -20°C~55°C (-4°F~131°F)         |
|                               | Charge                | 0°C~40°C (32°F~104°F)           |
|                               | Storage               | -20°C~50°C (-4°F~122°F)         |
| Nominal Operating Temp. Range | 25±3°C (77±5°F)       |                                 |
| Max.Charging Current(25°C)    | 300.0A                |                                 |
| Charge voltage(25°C)          | Float                 | 2.25V                           |
|                               | Temp. Coefficient     | -3mV/cell/°C                    |
|                               | Cycle(Equalization)   | 2.35~2.40V                      |
| Effect of temp. to Capacity   | 40°C (104°F)          | 106%                            |
|                               | 25°C (77°F)           | 100%                            |
|                               | 0°C (32°F)            | 86%                             |
| Self Discharge                | ≤3% per month at 25°C |                                 |



## Layout



## Constant Current Discharge (Amperes) at 25 °C (77° F)

| F.V/Time   | 1h    | 2h    | 3h    | 5h    | 8h    | 10h   | 24h  | 48h  | 72h  | 100h | 120h |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 1.85V/cell | 544.9 | 371.7 | 287.7 | 197.4 | 147.8 | 125.4 | 55.8 | 29.9 | 21.5 | 16.3 | 14.0 |
| 1.80V/cell | 613.1 | 408.5 | 312.9 | 213.2 | 157.9 | 134.4 | 58.2 | 31.0 | 22.3 | 16.8 | 14.4 |
| 1.75V/cell | 657.3 | 420.0 | 320.3 | 217.4 | 160.2 | 136.6 | 59.5 | 31.7 | 22.9 | 17.0 | 14.7 |
| 1.70V/cell | 703.1 | 442.8 | 335.9 | 226.8 | 162.4 | 137.8 | 60.5 | 32.3 | 23.1 | 17.3 | 14.9 |
| 1.67V/cell | 722.5 | 452.5 | 342.4 | 231.1 | 164.6 | 140.0 | 61.0 | 32.7 | 23.3 | 17.6 | 15.0 |
| 1.60V/cell | 735.5 | 457.9 | 346.7 | 233.3 | 165.8 | 140.0 | 61.5 | 33.1 | 23.4 | 17.8 | 15.2 |

## Constant Power Discharge (Watts/cell) at 25 °C (77° F)

| F.V/Time   | 1h     | 2h    | 3h    | 5h    | 8h    | 10h   | 24h   | 48h  | 72h  | 100h | 120h |
|------------|--------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| 1.85V/cell | 1053.1 | 723.5 | 561.8 | 388.5 | 292.3 | 250.9 | 111.5 | 59.8 | 43.2 | 32.8 | 28.3 |
| 1.80V/cell | 1178.5 | 790.7 | 609.0 | 417.9 | 312.5 | 266.6 | 116.2 | 62.0 | 44.7 | 33.7 | 29.0 |
| 1.75V/cell | 1255.8 | 807.5 | 620.6 | 424.2 | 317.0 | 271.0 | 118.6 | 63.4 | 45.8 | 34.2 | 29.4 |
| 1.70V/cell | 1332.7 | 847.8 | 648.0 | 441.7 | 320.3 | 273.3 | 120.4 | 64.5 | 46.2 | 34.6 | 29.8 |
| 1.67V/cell | 1361.9 | 861.8 | 656.6 | 447.1 | 323.7 | 275.5 | 121.4 | 65.1 | 46.5 | 35.2 | 30.2 |
| 1.60V/cell | 1377.0 | 868.3 | 662.0 | 450.4 | 324.8 | 277.8 | 122.3 | 65.8 | 46.8 | 35.5 | 30.5 |



# Solar Series-Tubular Gel 12 OPzV1200(2V1680Ah)



## Applications

- Green energy systems (solar, wind, hydro, etc)
- Telecommunications installations
- Solar power stations
- Alarm installations
- Railway crossing
- Street lighting
- Pump systems
- Signal station
- Street signs
- Traffic lights
- Lawn lamp

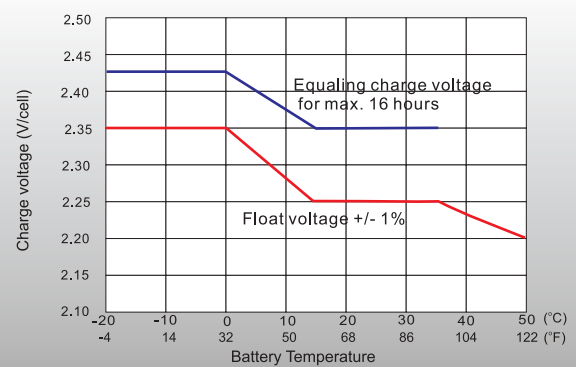
## General Features

- 16-18 years design life(25°C)
- Better recovery performance
- Wide working temperature range (-20~55)°C
- No electrolyte stratification provides longer service life
- High recombination efficient
- Build in copper core based in lead will carry large current
- Separator imported form AMER-SIL high porosity, PVC-SiO<sub>2</sub> and low resistance
- Pasted negative plate special grid design increase the active material.availability large current discharge and charge ability
- Tubuler type positive plate (polyester tube) prevent the active material from falling. Multi metal alloy pressed positive grid increase the anti corrosion ability and service life

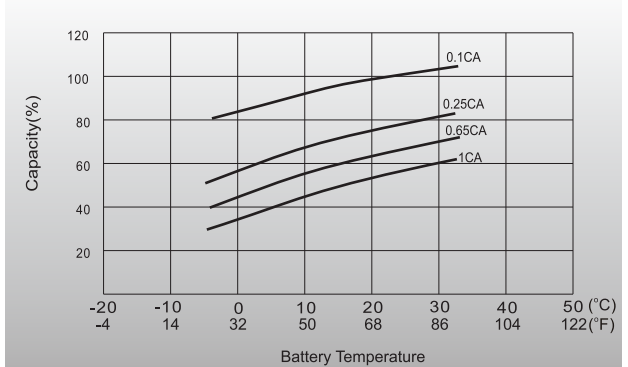
## Standards

- Compliance with IEC 60896, IEC 61427, DIN 40742 standards
- UL, CE Certified
- Manufactured in Leoch®TS16949, OHSAS 18001,ISO 9001 and ISO 14001certified production facilities

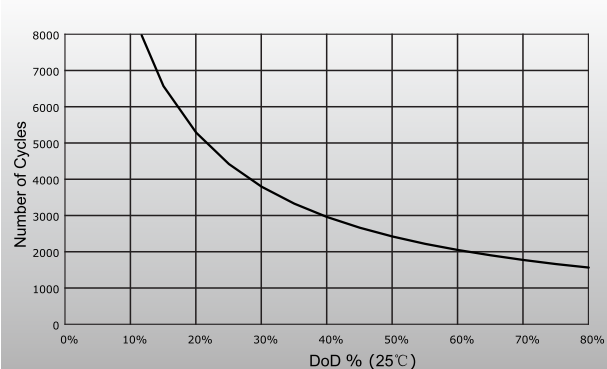
## Charge voltage vs ambient temperature curve



## Temperature effects in relation to battery capacity



## Cycle Life in Relation to DOD



## Float Service Life

