STARMAX

# OPzV TUBULAR GEL BATTERIES

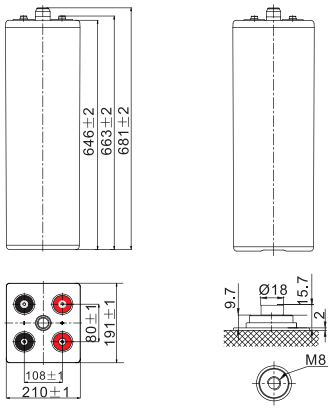
## OPzV800-2


UPS

www.starmaxbatteries.com

# OPzV800-2 (2V 800Ah)

## LAYOUT





## General Features

- 20 years design life(20°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-$SiO_2$ and low resistance
- Pasted negative plate special grid design increase the active material. Availablity large current discharge and charge ability
- Tubuler type positive plate (polyester tube) prevent the active material from falling. Muti metal alloy pressed positive grid increase the anti corrosion ablity and service life

## Applications

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

## Standards

- ACC. to IEC 60896, IEC 61427, DIN 40742 standards
- UL, CE Certified
- Manufactured by Starmax, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

# SPECIFICATIONS

| | | |
|---|---|---|
| Rated Voltage | 2V | |
| Nominal Capacity | 800Ah | $C_{10}$ ,1.80V/cell |
| Dimensions | Length | 191mm(7.52 in.) |
| | Width | 210mm(8.27 in.) |
| | Container height | 646mm(25.43 in.) |
| | Total height | 681mm(26.81 in.) |
| Approx. weight | 65.1Kg (143.52 lbs) | |
| Terminal | M8 | |
| Container material | ABS | |
| Rated capacity (25°C) | 1040.0 Ah | (100hr,10.4A,1.80V/cell) |
| | 800.0 Ah | (10hr,80.0A,1.80V/cell) |
| | 697.5 Ah | (5hr,139.5A,1.75V/cell) |
| | 612.0 Ah | (3hr,204.0A,1.75V/cell) |
| | 446.0 Ah | (1hr,446.0A,1.65V/cell) |
| Max. discharge current | 6400A | |
| Internal resistance (25°C) | Approx.0.50mΩ | |
| 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℃ (77±5°F) | |
| Cycle Use | 200.0A | |
| Effect of temp. to Capacity | 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 | |

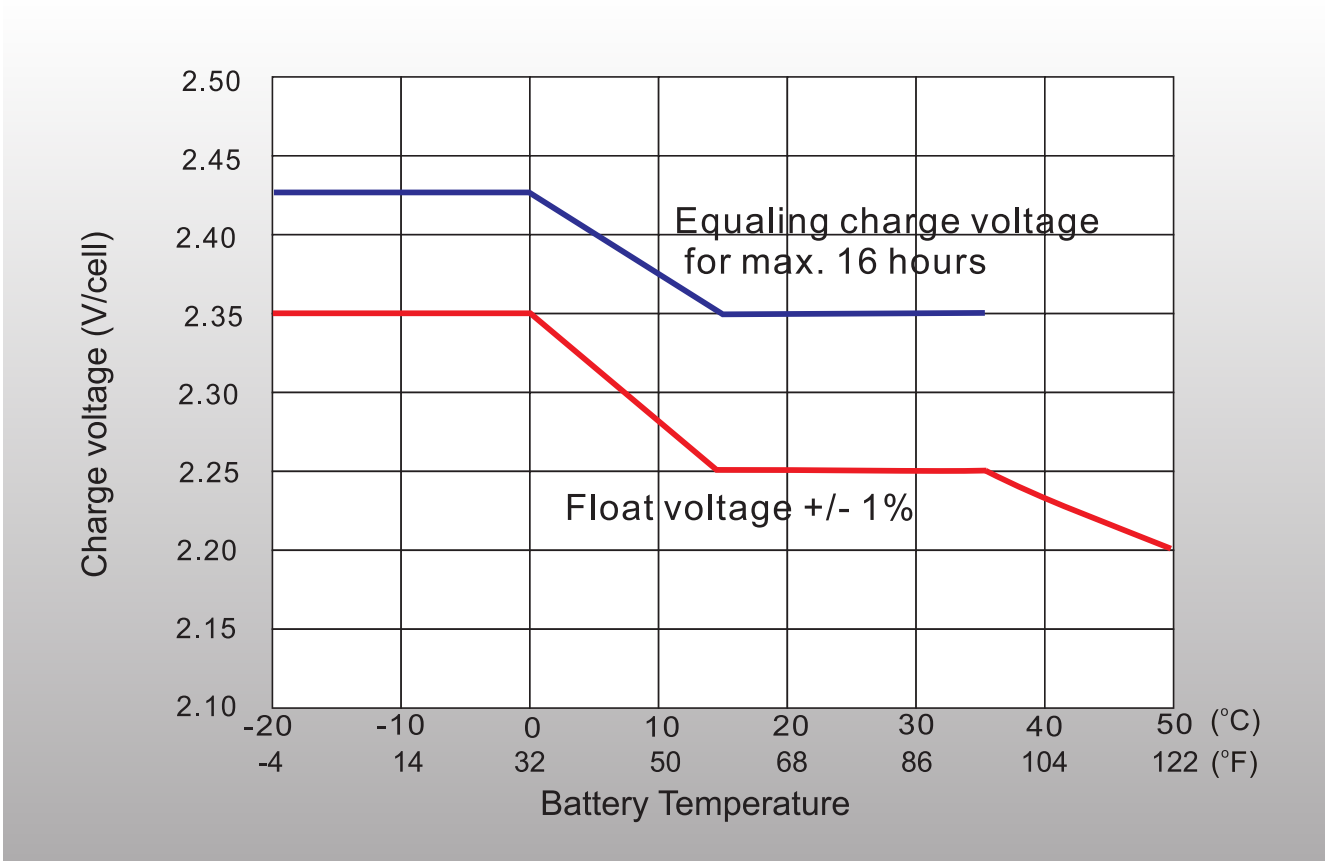
## Constant Current Discharge (Amperes) at 25°C (77°F )

| F.V/Time | 1h | 2h | 3h | 5h | 8h | 10h | 24h | 48h | 72h | 100h | 120h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 357.5 | 241.8 | 185.6 | 127.0 | 89.0 | 75.0 | 35.6 | 18.6 | 13.4 | 10.1 | 8.75 |
| 1.80V/cell | 400.8 | 264.8 | 201.9 | 136.8 | 95.2 | 80.0 | 36.8 | 19.3 | 13.9 | 10.4 | 9.00 |
| 1.75V/cell | 416.7 | 274.0 | 206.4 | 139.5 | 96.8 | 81.4 | 37.1 | 19.8 | 14.2 | 10.6 | 9.13 |
| 1.70V/cell | 435.0 | 280.9 | 210.6 | 141.6 | 98.2 | 82.3 | 37.7 | 20.2 | 14.4 | 10.8 | 9.26 |
| 1.67V/cell | 446.3 | 285.5 | 214.5 | 143.9 | 99.3 | 83.0 | 38.0 | 20.4 | 14.5 | 10.9 | 9.38 |
| 1.60V/cell | 453.2 | 290.1 | 217.0 | 145.3 | 100.0 | 83.7 | 38.3 | 20.6 | 14.6 | 11.1 | 9.48 |

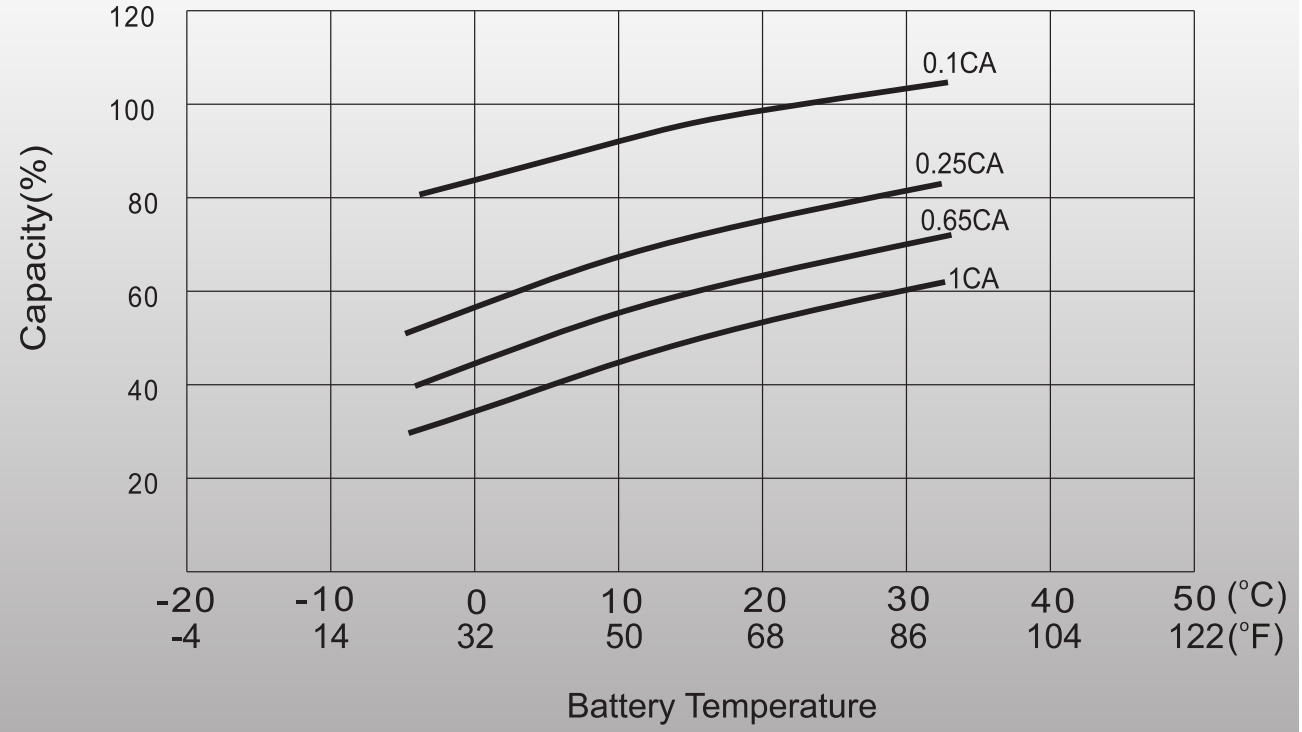
## Constant Power Discharge (Watts/Cell) at 25°C (77°F )

| F.V/Time | 1h | 2h | 3h | 5h | 8h | 10h | 24h | 48h | 72h | 100h | 120h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 690.0 | 469.7 | 362.0 | 249.4 | 176.4 | 149.0 | 71.2 | 37.3 | 26.9 | 20.4 | 17.6 |
| 1.80V/cell | 772.0 | 513.5 | 391.8 | 267.7 | 188.6 | 158.9 | 73.5 | 38.6 | 27.8 | 20.9 | 18.1 |
| 1.75V/cell | 797.0 | 525.0 | 398.7 | 272.2 | 191.3 | 161.1 | 73.9 | 39.5 | 28.5 | 21.3 | 18.3 |
| 1.70V/cell | 824.4 | 536.5 | 405.6 | 276.8 | 193.4 | 162.7 | 75.0 | 40.2 | 28.8 | 21.6 | 18.6 |
| 1.67V/cell | 840.3 | 545.7 | 412.4 | 279.1 | 195.2 | 164.1 | 75.6 | 40.6 | 29.0 | 21.9 | 18.8 |
| 1.60V/cell | 849.4 | 550.3 | 414.7 | 281.4 | 196.1 | 165.0 | 76.2 | 41.0 | 29.1 | 22.1 | 19.0 |

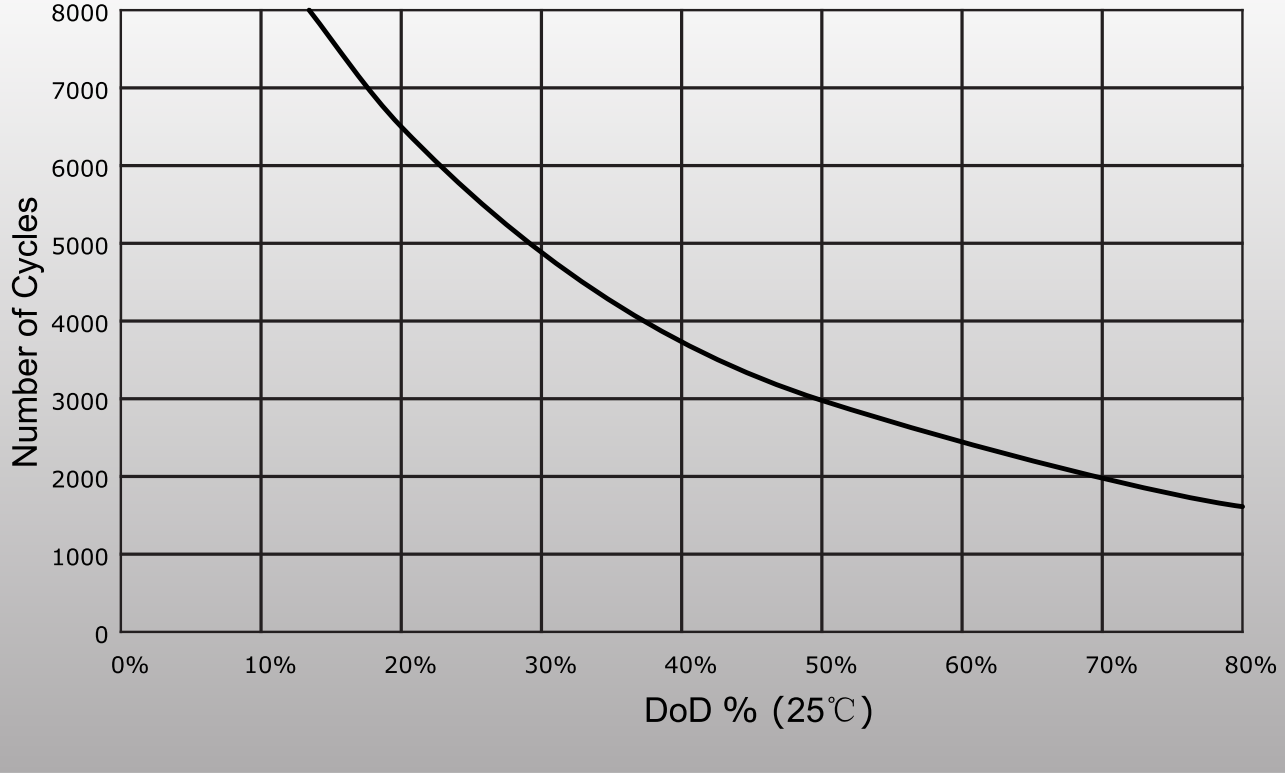
## Charge voltage vs Ambient Temp. Curve



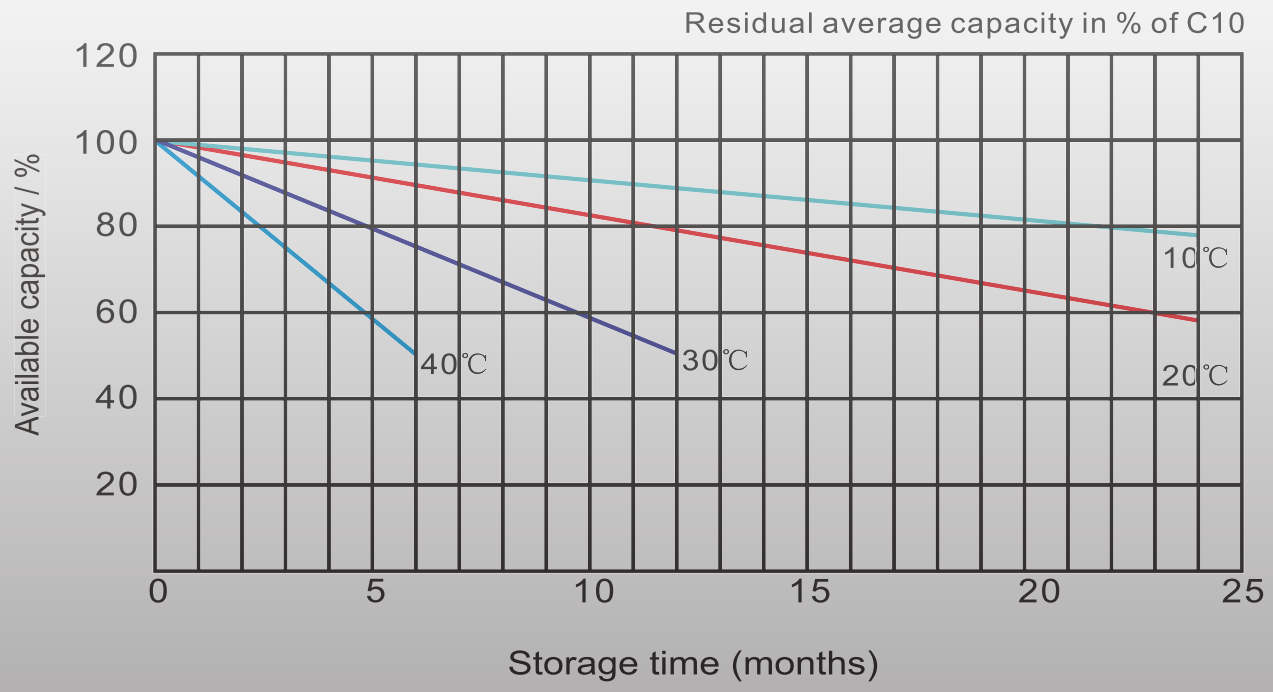
# Temperature Effects in relation to Battery Capacity

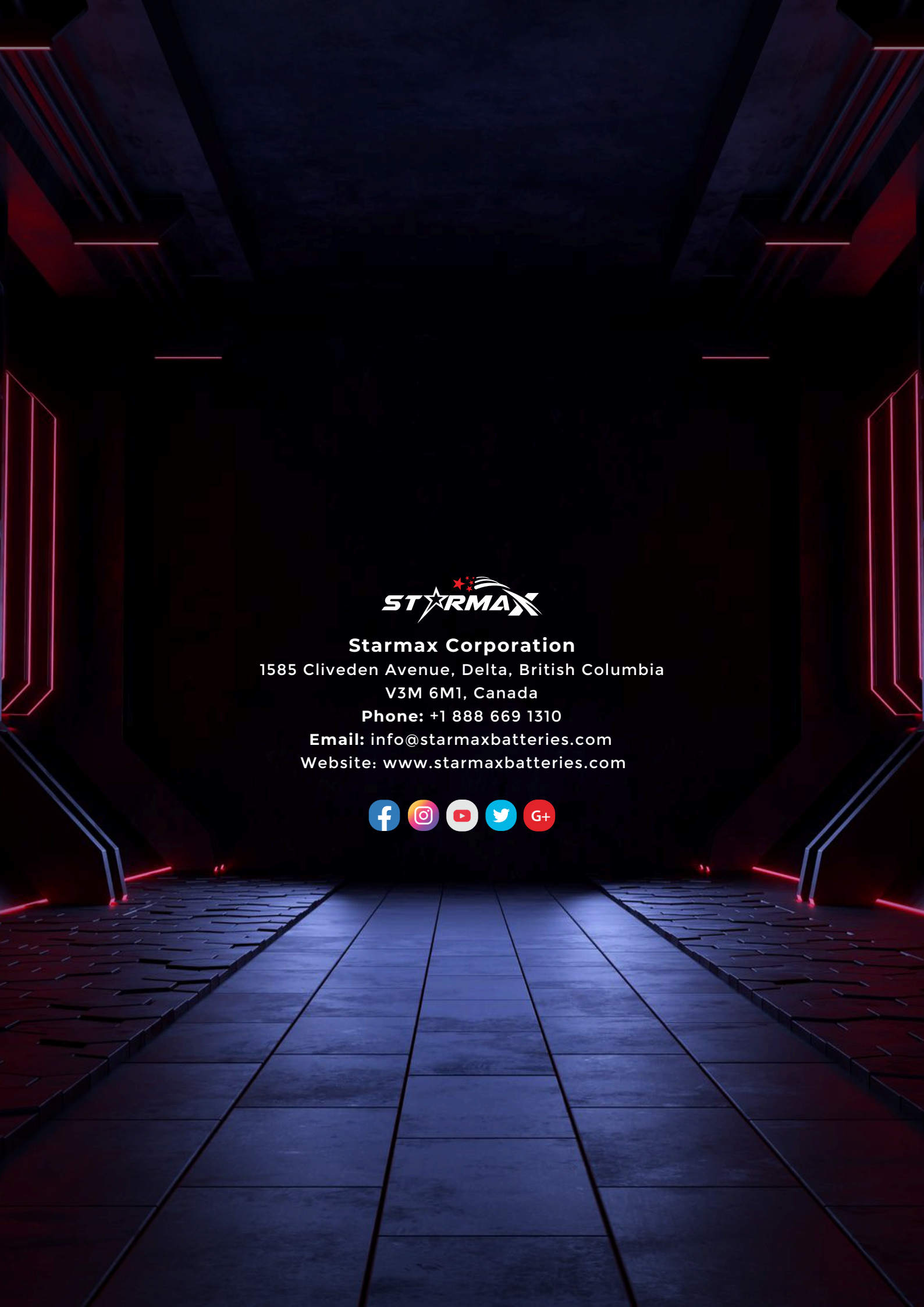



# Cycle Life in Relation to DOD



# General Relation of Capacity vs Storage Time



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