

# STARMAX

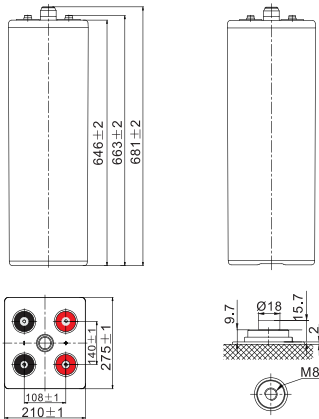
## OPzV TUBULAR GEL BATTERIES

OPzV1200-2



# OPzV1200-2 (2V 1200Ah)

## 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<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. Muti metal alloy pressed positive grid increase the anti corrosion ability 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	1200Ah	C <sub>10</sub> , 1.80V/cell
Dimensions	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)	1560.0 Ah	(100hr,15.6A,1.80V/cell)
	1200.0 Ah	(10hr,120.0A,1.80V/cell)
	1046.5 Ah	(5hr,209.3A,1.75V/cell)
	929.1Ah	(3hr,309.7A,1.75V/cell)
	669.5 Ah	(1hr,669.5A,1.67V/cell)
Max. discharge current	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)	
Cycle Use	300.0A	
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	

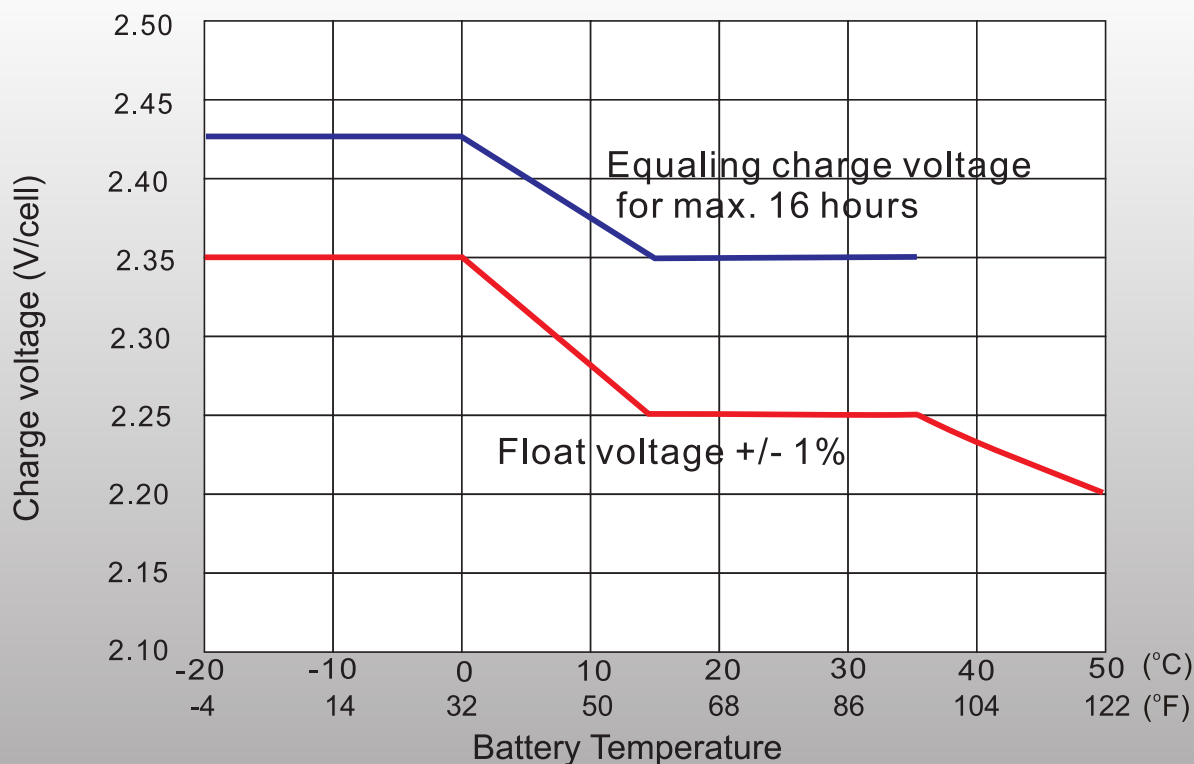
### Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	1h	2h	3h	5h	8h	10h	24h	48h	72h	100h	120h
1.85V/cell	536.3	362.7	278.4	190.4	133.5	112.5	53.4	27.9	20.1	15.2	13.1
1.80V/cell	601.2	397.2	302.8	205.2	142.8	120.0	55.3	29.0	20.8	15.6	13.5
1.75V/cell	625.1	411.0	309.7	209.3	145.2	122.1	55.6	29.7	21.4	15.9	13.7
1.70V/cell	652.4	421.4	315.9	212.4	147.3	123.4	56.5	30.2	21.6	16.1	13.9
1.67V/cell	669.5	428.3	321.7	215.8	149.0	124.5	57.0	30.5	21.8	16.4	14.1
1.60V/cell	679.8	435.2	325.5	217.9	150.0	125.5	57.5	30.9	21.9	16.6	14.2

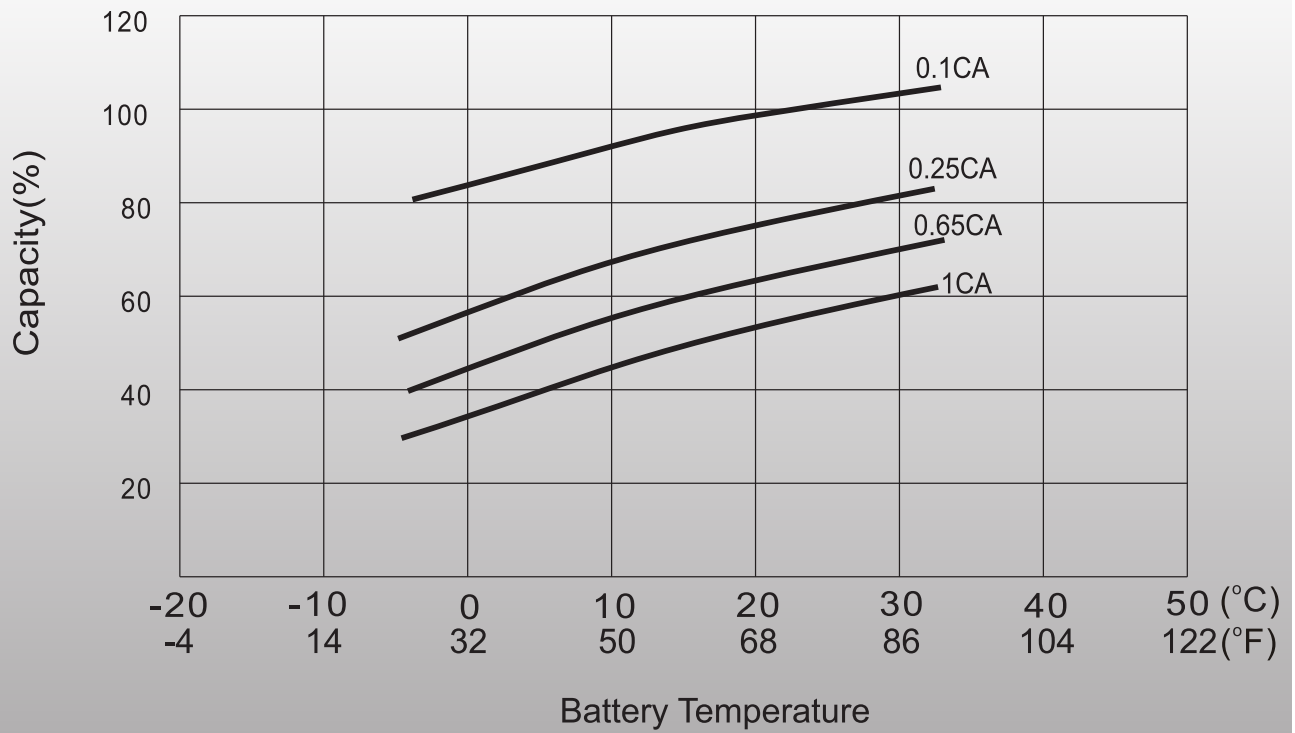
### Constant Power Discharge (Watts/Cell) at 25°C (77°F)

F.V/Time	1h	2h	3h	5h	8h	10h	24h	48h	72h	100h	120h
1.85V/cell	1035.0	704.6	543.0	374.0	264.6	223.5	106.7	55.9	40.3	30.6	26.4
1.80V/cell	1158.0	770.2	587.7	401.5	282.8	238.3	110.3	58.0	41.8	31.3	27.1
1.75V/cell	1195.6	787.5	598.0	408.3	287.0	241.7	110.9	59.2	42.8	31.9	27.5
1.70V/cell	1236.6	804.8	608.3	415.2	290.1	244.1	112.5	60.3	43.2	32.3	27.9
1.67V/cell	1260.5	818.6	618.7	418.6	292.8	246.2	113.4	60.9	43.5	32.9	28.2
1.60V/cell	1274.1	825.5	622.1	422.1	294.2	247.5	114.3	61.5	43.7	33.2	28.5

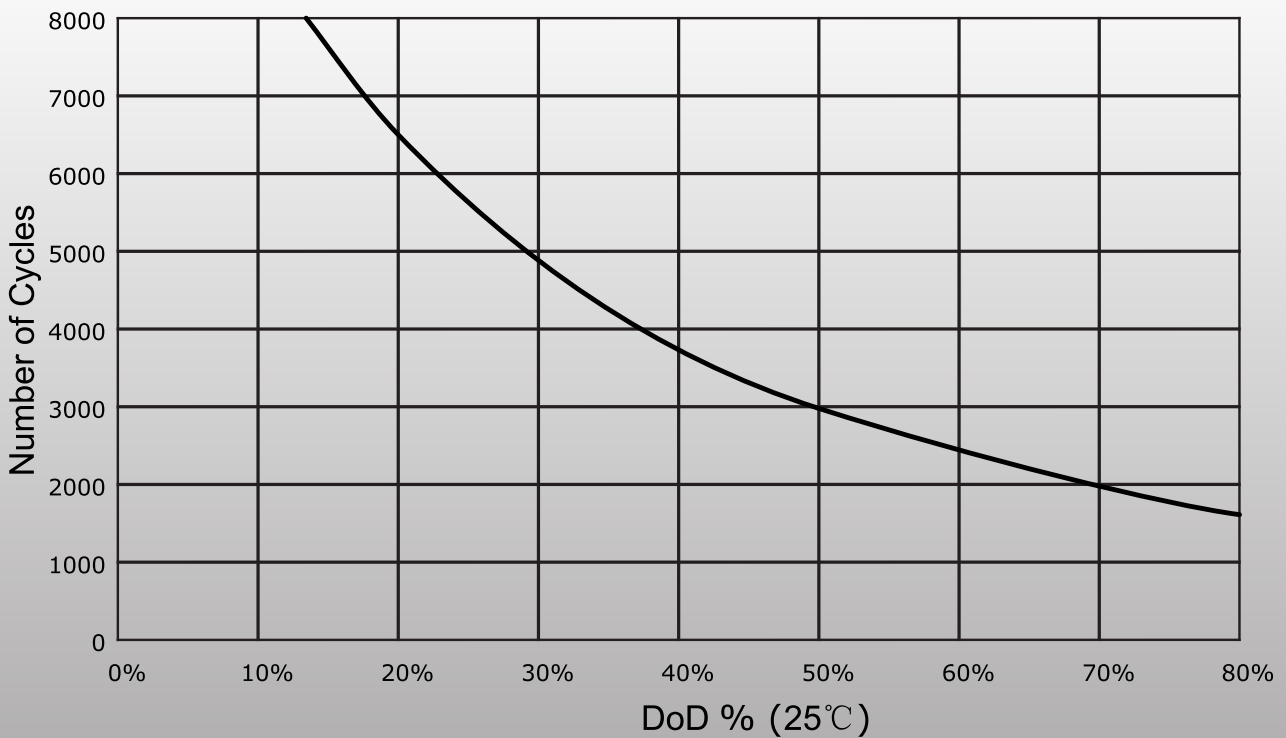
## Charge voltage vs Ambient Temp. Curve



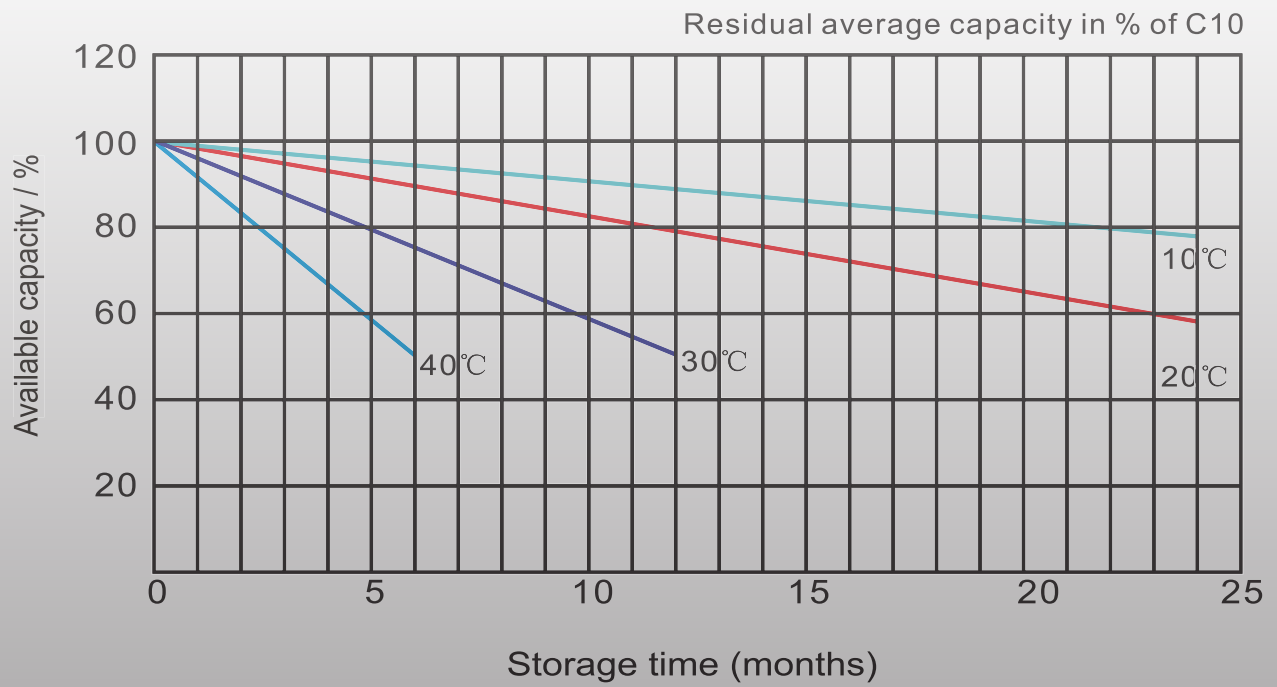
# Temperature Effects in relation to Battery Capacity



# Cycle Life in Relation to DOD



# General Relation of Capacity vs Storage Time





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