OPZS&OPZV

Reserve Power Solution

Long Life Tubular Plate




OPZS
TUBULAR FLOODED BATTERY CHRACTERISTIC

Advantages

- Plates: Lead low-antimony positive plate can effectively prevent shedding of active material. The spines are casted by multi-alloy, of which the crystals are very fine and compact, in order to achieve excellent corrosion resistance and long cycle life. Negative flat plates are pasted plates with wavy construction, greatly improving the utilization rate of active material and high current discharge property. Also the charging acceptance ability is very good.
- Container: SAN transparent container, better corrosion resistance, higher strength, nice appearance. People can directly see the internal construction and actual situation of batteries through SAN containers.
- Separator: Imported PVC-SiO2 separator from Amer-sil, a famous European company. This kind of separator has a large pore rate and lower electrical resistance.
- Terminal sealing: Lead pillar with copper insert has better current loading property and better corrosion resistance. Private sealing construction can effectively eliminate the stress caused by plate growth in later period of battery operation. This can prevent any leakage ensuring the reliability of pillar sealing greatly improving the service life of the battery.
- Anti-acid plug: Special funneled anti-acid plug can filter acid mist and is flame resistant. This is convenient for direct measuring the density and temperature of electrolyte. It is safe and easy to maintain.

ELECTRICAL SPECIFICATIONS

Floating voltage:	2.22~2.25 V/cell (20□)
Boost charge:	2.35~2.40 V/cell (20□)
Charging current(max.):	0.1CA
Temp.Coefficient:	-3mV/□ □ /cell□
Electrolyte density(charged):	1.240± 0.01g/cm^3 (20□)

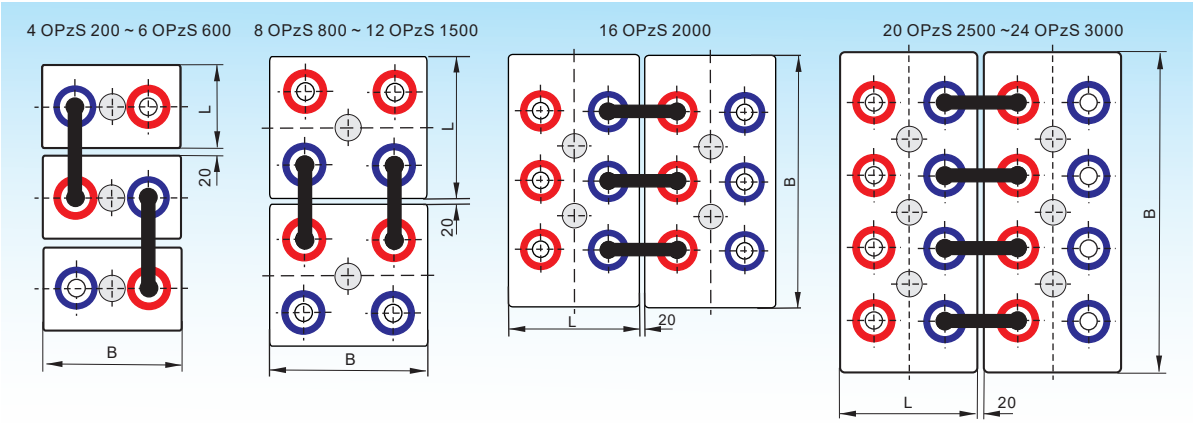
General Features

- Lower self discharge.
- Higher thermal capacity, no thermal runaway will occur.
- Superior deep cycle performance.
- Wide operation temperature range.
- Long service life, designed life 15-20 years.

Main Applications

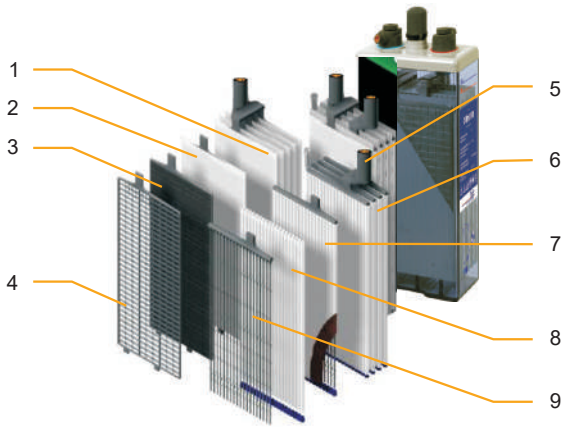
- Telecommunications.
- Radio and cellular telephone relay stations.
- Emergency lighting systems.
- Power stations, Conventional power stations, alternative power (solar, wind).
- Railway signalling.
- Maritime standby power on ships and ashore.
- Solar and Wind Turbine Energy Storage.
- Buoy lighting.

CONNECTION



OPZS
TUBULAR FLOODED BATTERY CHRACTERISTIC

Battery Construction



1	Negative plate group	6	Positive plate group
2	Separator	7	Positive plate
3	Negative plate	8	Gauntlet
4	Negative flat grid	9	Positive tubular grid

2V Flooded Battery Specifications

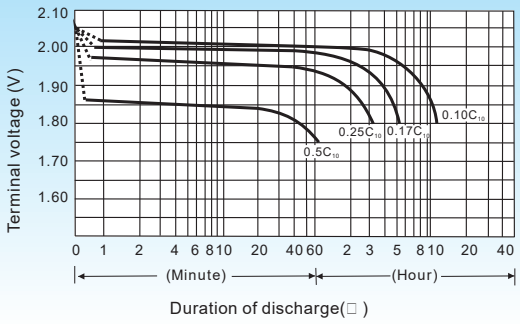
Model Number	Nominal Voltage (V)	Rated Capacity C_3(Ah)	Rated Capacity C_8(Ah)	Rated Capacity C_{10}(Ah)	Dimension (mm/in.)								Approx Weight (Kg)		Terminal type
					Length		Width		Height		Total Height				
					mm	in.	mm	in.	mm	in.	mm	in.	(Kg)	(lbs)	
2 OPZS100	2	77	99	100	103	4.06	206	8.11	355	13.98	410	16.14	13.2	29.1	M8
3 OPZS150	2	116	148	150	103	4.06	206	8.11	355	13.98	410	16.14	15.3	33.7	M8
4 OPZS200	2	154	198	200	103	4.06	206	8.11	355	13.98	410	16.14	17.4	38.4	M8
5 OPZS250	2	193	247	250	124	4.88	206	8.11	355	13.98	410	16.14	20.4	45.0	M8
6 OPZS300	2	231	297	300	145	5.71	206	8.11	355	13.98	410	16.14	24.5	54.0	M8
5 OPZS350	2	270	346	350	124	4.88	206	8.11	471	18.54	526	20.71	28.3	62.4	M8
6 OPZS420	2	324	415	420	145	5.71	206	8.11	471	18.54	526	20.71	32.7	72.1	M8
7 OPZS490	2	378	484	490	166	6.54	206	8.11	471	18.54	526	20.71	38.0	83.8	M8
6 OPZS600	2	463	593	600	145	5.71	206	8.11	646	25.43	701	27.60	45.4	100.1	M8
8 OPZS800	2	617	790	800	191	7.52	210	8.27	646	25.43	701	27.60	62.9	138.7	M8
10 OPZS1000	2	771	989	1000	233	9.71	210	8.27	646	25.43	701	27.60	77.4	170.7	M8
12 OPZS1200	2	925	1186	1200	275	10.83	210	8.27	646	25.43	701	27.60	91.7	202.2	M8
12 OPZS1500	2	1157	1482	1500	275	10.83	210	8.27	796	31.34	851	33.50	113.8	250.9	M8
14 OPZS1750	2	1349	1730	1750	399	15.71	214	8.43	772	30.39	827	32.56	140.0	308.7	M8
16 OPZS2000	2	1542	1977	2000	399	15.71	214	8.43	772	30.39	827	32.56	150.0	330.8	M8
20 OPZS2500	2	1928	2471	2500	487	19.17	212	8.35	772	30.39	827	32.56	189.4	417.6	M8
24 OPZS3000	2	2313	2966	3000	576	22.68	212	8.35	772	30.39	827	32.56	224.8	495.7	M8

6V\12V Flooded Battery Specifications

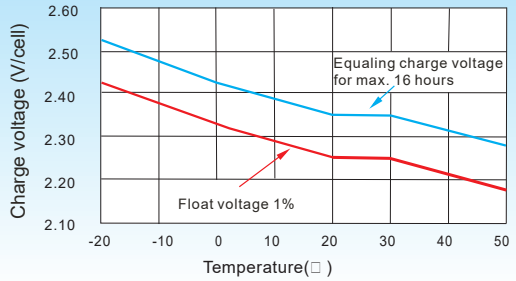
Model Number	Nominal Voltage (V)	Rated Capacity C_3(Ah)	Rated Capacity C_8(Ah)	Rated Capacity C_{10}(Ah)	Dimension (mm/in.)								Approx Weight (Kg)		Terminal type
					Length		Width		Height		Total Height				
					mm	in.	mm	in.	mm	in.	mm	in.	(Kg)	(lbs)	
6 4 OPZS200	6	141	193	200	272	10.71	205	8.07	337	13.27	384	15.12	46.0	101.4	M8
6 5 OPZS250	6	176	241	250	381	15.00	205	8.07	337	13.27	384	15.12	60.0	132.3	M8
6 6 OPZS300	6	212	556	300	381	15.00	205	8.07	337	13.27	384	15.12	65.5	144.4	M8
12 1 OPZS50	12	35	48	50	272	10.71	205	8.07	337	13.27	384	15.12	39.0	86.0	M8
12 2 OPZS100	12	71	97	100	272	10.71	205	8.07	337	13.27	384	15.12	48.7	107.4	M8
12 3 OPZS150	12	106	145	150	381	15.00	205	8.07	337	13.27	384	15.12	67.4	148.7	M8

OPzS PERFORMANCE CHARACTERISTICS

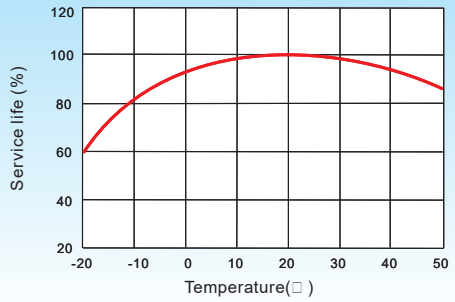
Discharge characteristics 77°F (25□)



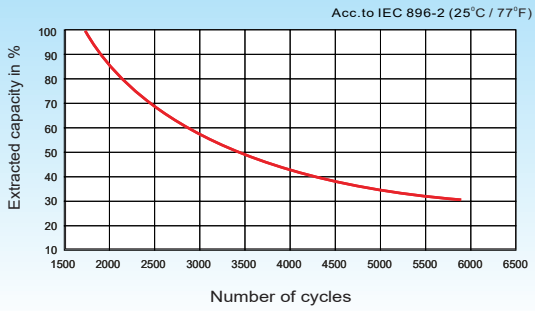
Charge voltage vs ambient temperature curve



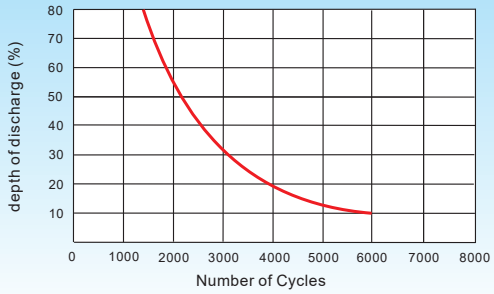
Service life vs ambient temperature



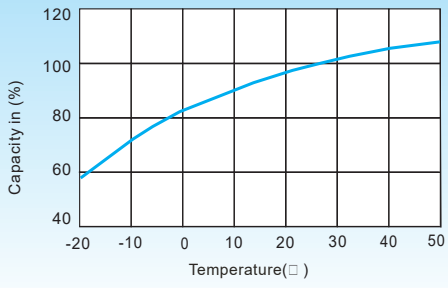
2V OPzS Cycle life in relation to depth of discharge



12V OPzS Cycle service life in relation to depth of discharge



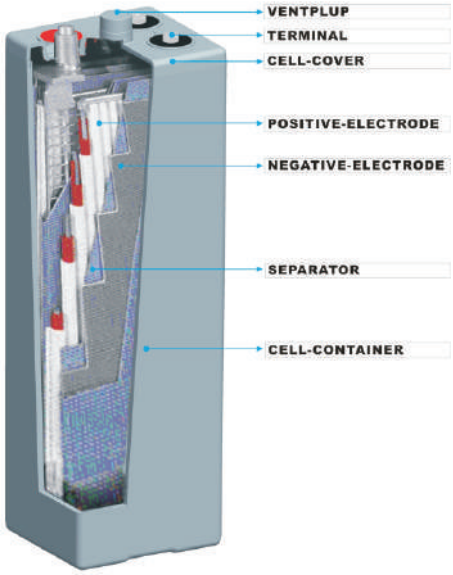
Discharge voltage vs ambient temperature curve(I_{10}A)



OPZV
TUBULAR GEL BATTERY CHRACTERISTIC

Main Technical Advantages
- Completely sealed throughout the life of the battery.
- Service life up to 18-20 years in continuous float operation down to approx. 80% capacity.
- Gel electrolyte.
- Low gassing thanks to antimony-free alloy and internal oxygen recombination.
- Minimum space required, room requirements are minimal (e.g. No washing facilities needed), ventilation requirements are minimal.
- Easy to move and handle.
- Easy install using cable connectors with insulated terminal covers.
- Ready for immediate use without further commissioning work.
- Can be supplied as a standard vertical installation or by special request, for a horizontal installation.
- Very low self-discharge ≤50% of rated capacity in 2 years at 20°C ambient temperature.
- Deep discharge protected,a load can be connected to the battery for up to 4 weeks.
- No internal short circuits possible due to the gel structure.
- No acid stratification, so no equalizing charge necessary.

General Features
- Capacity 45 to 3000 AH
- Virgin lead plates w/copper alloy terminal inserts (low resistance)
- Wider Operating Temperature: -4°F to 131° (-20°to 55 °C)
- Solid ABS jars & covers (UL94V-0 Flame Retardant available)
- Easy installation in vertical or horizontal seismic modular racks
- Designed for Critical Telecom Applications up to 20 yr design life
- 100% initial capacity UL Recognized, IEC61427 Certified, & IATA Approved for Air Freight



Main Applications
- Telecommunications
- Radio and cellular telephone relay stations.
- Emergency lighting systems.
- Power stations, Conventional power stations, alternative power (solar, wind).
- Large UPS and computer back-up.
- Railway signaling.
- Maritime standby power on ships and ashore.
- Process and control engineering.
- Standby power.
- Buoy lighting.

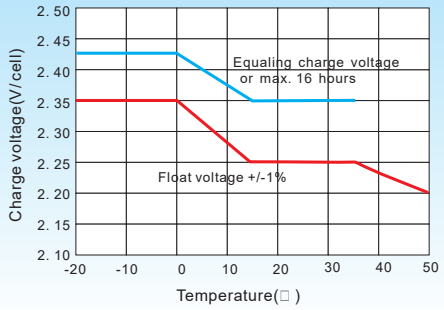


6V\12V Flooded Battery Specifications

Model Number	Nominal Voltage (V)	Rated Capacity C_3(Ah)	Rated Capacity C_8(Ah)	Rated Capacity C_{10}(Ah)	Dimension (mm/in.)								Approx Weight (Kg)		Terminal type
					Length		Width		Height		Total Height				
					mm	in.	mm	in.	mm	in.	mm	in.	(Kg)	(lbs)	
4OPzV200	2	163.5	217	224	103	4.06	206	8.11	355	13.98	390	15.35	18.8	41.5	T7-A
5OPzV250	2	204.3	271	280	124	4.88	206	8.11	355	13.98	390	15.35	23.1	50.9	T7-A
6OPzV300	2	245.4	326	336	145	5.71	206	8.11	355	13.98	390	15.35	27.1	59.8	T7-A
5OPzV350	2	283.8	378	392	124	4.88	206	8.11	471	18.54	506	19.92	29.0	63.9	T7-A
6OPzV420	2	340.2	454	470	145	5.71	206	8.11	471	18.54	506	19.92	34.5	76.1	T7-A
7OPzV490	2	396.9	529	549	166	6.54	206	8.11	471	18.54	506	19.92	39.0	86.0	T7-A
6OPzV600	2	478.8	642	672	145	5.71	206	8.11	646	25.43	681	26.81	46.0	101.4	T7-A
8OPzV800	2	639.6	857	896	191	7.52	210	8.27	646	25.43	681	26.81	65.1	143.5	T7-A
10OPzV1000	2	800.1	1066	1142	233	9.17	210	8.27	646	25.43	681	26.81	78.5	173.1	T7-A
12OPzV1200	2	960.9	1282	1344	275	10.83	210	8.27	646	25.43	681	26.81	93.0	205.1	T7-A
12OPzV1500	2	1187.7	1595	1680	275	10.83	210	8.27	796	31.34	831	32.72	115.0	253.6	T7-A
16OPzV2000	2	1581.3	2123	2240	399	15.71	214	8.27	772	30.39	807	31.77	155.0	341.8	T7-A
20OPzV2500	2	1978.2	2661	2800	487	19.17	212	8.35	772	30.39	807	31.77	196.0	432.2	T7-A
24OPzV3000	2	2375.1	3190	3360	576	22.68	212	8.35	772	30.39	807	31.77	232.0	511.6	T7-A

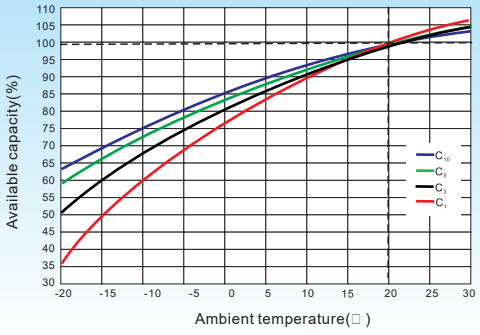
2V OPzV PERFORMANCE CHARACTERISTICS

Charge voltage vs ambient temperature curve

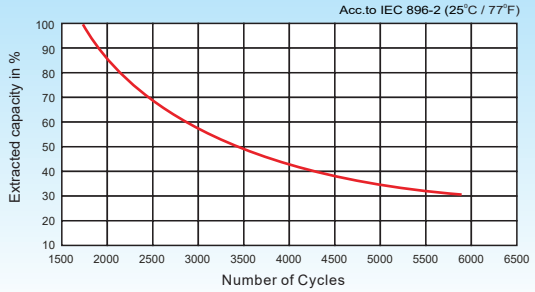


We recommend the voltage 2.25V for continuous charging.
The charging voltage should be compensated to the curve under different ambient temperature.

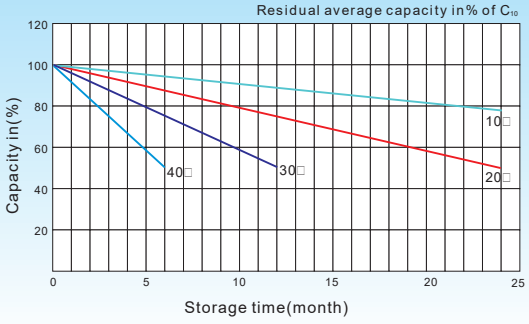
Available capacity in relation to the ambient temperature



Cycle Life in Relation to Depth of Discharge



Self-discharge in relation to the storage temperature

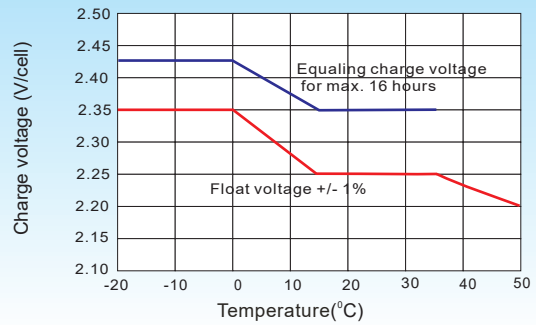


12V Gel Battery Specifications

Model Number	Nominal Voltage (V)	Rated Capacity C_3(Ah)	Rated Capacity C_8(Ah)	Rated Capacity C_{10}(Ah)	Dimension (mm/in.)								Approx Weight (Kg)		Terminal type
					Length		Width		Height		Total Height				
					mm	in.	mm	in.	mm	in.	mm	in.	(Kg)	(lbs)	
12V3O PzV100FT	12	79.5	104.8	108	551	21.7	110	4.33	287	11.3	287	11.3	39.7	87.5	T6
12V3O PzV120FT	12	95.4	126.4	130	551	21.7	110	4.33	287	11.3	287	11.3	42.3	93.3	T6
12V4O PzV150FT	12	119.4	163.2	162	549.5	21.6	124.5	4.90	315	12.4	315	12.4	51.7	114.0	T6-A
12V2OPzV40	12	31.8	41.8	43	260	10.2	168	6.61	208	8.2	230.0	9.1	19.0	41.9	T14
12V3OPzV60	12	48.9	62.7	65	260	10.2	168	6.61	208	8.2	229	9.0	23.7	52.3	T14
12V4OPzV80	12	63.6	84.0	86	330	13.0	173	6.81	212	8.3	218	8.6	30.8	67.9	T11
12V5OPzV100	12	79.5	104.8	108	408	16.1	177	6.97	225	8.9	225	8.9	38.3	84.5	T11
12V6OPzV120	12	95.1	124.8	129	483	19.0	170	6.69	238.5	9.4	238.5	9.4	45.7	100.8	T11
12V7OPzV140	12	111.3	145.6	151	532	20.9	207	8.15	214	8.4	220	8.7	54	119.1	T11
12V8OPzV160	12	126.9	167.2	173	532	20.9	207	8.15	214	8.4	220	8.7	59.3	130.8	T11
12V9OPzV180	12	143.1	188.0	195	522	20.6	240	9.45	218	8.6	224	8.8	67.4	148.6	T11
12V10OPzV200	12	163.5	208.8	216	522	20.6	268	10.55	220	8.7	226	8.9	75.9	167.4	T11

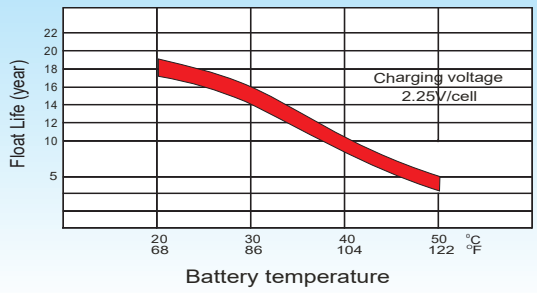
12V Gel Battery Specifications

Charge voltage vs ambient temperature curve

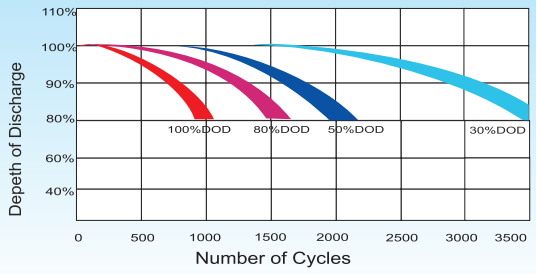


For continuous charging we recommend a voltage of 2.25 V.
The charging voltage must be compensated to the curve for
acontinuously different battery ambient temperature.

Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



General Relation of Capacity VS. Storage Time