

# OPzS2-3000(2V3000Ah)



OPzS series is flooded Lead Acid battery that adopts Tubular Plate technology to offer high reliability and performance. The Battery is designed and manufactured according to standards and with DIN40736/IEC60896 positive spine and patent formula of die-casting active material. The OPzS series batteries offer 400% more cyclic life than the standby series. It is suitable for solar and wind renewable energy storage, traction etc. The OPzS series is the best choice of energy storage system in high altitude area.

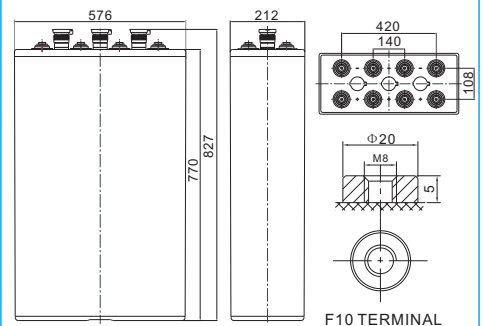


## Specification

<b>Cells Per Unit</b>	1
<b>Voltage Per Unit</b>	2
<b>Nominal Capacity</b>	3000Ah@10hr-rate to 1.80V per cell @25°C
<b>Weight</b>	Without Electrolyte 166.7 kg/With Electrolyte 226.8kg
<b>Internal Resistance</b>	Approx. 0.11 mΩ
<b>Terminal</b>	F10(M8)
<b>Max. Discharge Current</b>	10000A (5 sec)
<b>Design Life</b>	20 years (floating charge)
<b>Max. Charging Current</b>	300 A
<b>Reference Capacity</b>	C3 2439.3AH C5 2715.5AH C10 3000.0AH C20 3632.0AH
<b>Float Charging Voltage</b>	2.23 V~2.25 V @ 25°C Temperature Compensation: -3mV/°C/Cell
<b>Cycle Use Voltage</b>	2.40 V~2.45 V @ 25°C Temperature Compensation: -4mV/°C/Cell
<b>Operating Temperature Range</b>	Discharge: -15°C~50°C Charge: 0°C~40°C Storage: -15°C~50°C
<b>Normal Operating Temperature Range</b>	25°C ± 5°C
<b>Self Discharge</b>	OPzS series is flooded Lead Acid battery . It can be stored for up to 2 years before filling acid. Monthly Self-discharge ratio is less than 3.5% at 20°C .Please charged batteries before using.
<b>Container Material</b>	A.B.S. UL94-HB, UL94-V0 Optional.

## Dimensions

Unit: mm



Length	576±2mm (22.7 inches)
Width	212±2mm (8.35 inches)
Height	770±2mm (30.3 inches)
Total Height	827±2mm (32.6 inches)
Torque Value	10~12 N*m

### Constant Current Discharge Characteristics :A(25°C)

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	3166	2042	1209	880.4	678.8	569.2	496.0	390.2	328.4	188.9
1.65V	3069	1922	1170	859.0	669.3	561.5	489.7	387.1	325.3	187.1
1.70V	2834	1861	1137	839.1	657.8	552.9	483.4	384.0	322.1	185.2
1.75V	2544	1738	1088	813.1	647.1	543.1	473.9	377.7	315.8	181.6
1.80V	2297	1550	1008	764.2	618.5	519.4	453.4	360.4	300.0	172.5
1.85V	1916	1329	901.2	693.7	571.0	480.2	420.2	336.7	281.1	161.6

### Constant Power Discharge Characteristics : WPC(25°C)

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	5355	3483	2210	1650	1312	1102	963.6	764.8	652.4	375.2
1.65V	5265	3335	2151	1617	1295	1090	954.2	758.5	649.4	373.4
1.70V	5000	3301	2098	1584	1275	1076	944.7	752.2	643.3	369.8
1.75V	4609	3160	2032	1547	1258	1060	928.9	742.7	634.1	364.6
1.80V	4277	2895	1907	1467	1206	1017	892.5	714.4	608.0	349.6
1.85V	3666	2551	1742	1349	1117	944.0	830.9	673.5	572.8	329.4

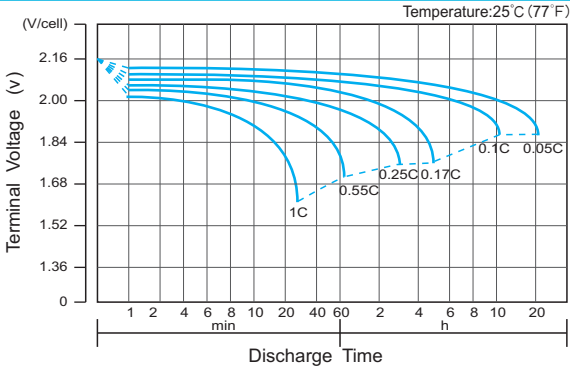
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

The battery must be fully charged before the capacity test. The C<sub>10</sub> should reach 95% after the first cycle and 100% after the third cycle.

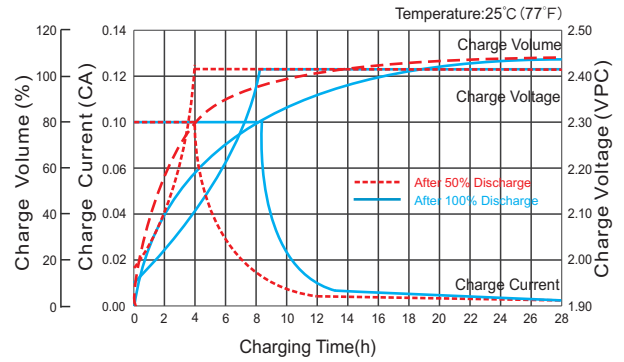
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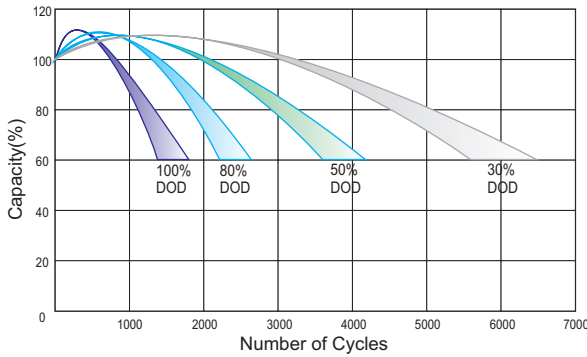
## Discharge Characteristics Curve



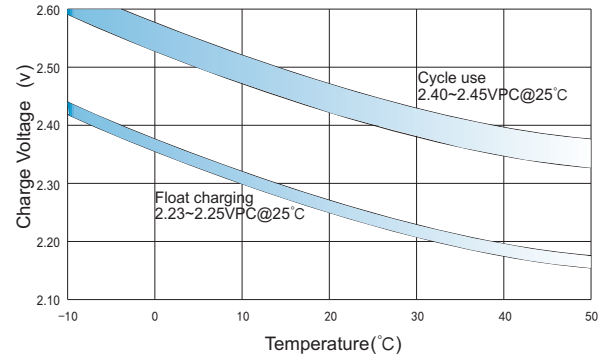
## Charge Characteristic Curve for Cycle Use(IU)



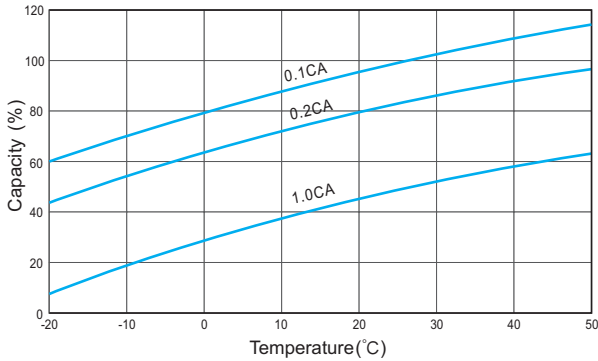
## Cycle Life in Relation to Depth of Discharge



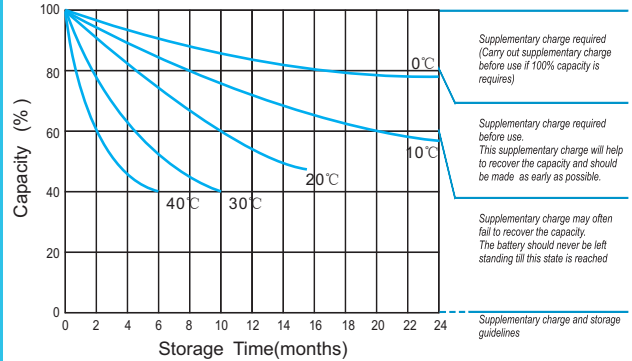
## Relationship Between Charging Voltage and Temperature



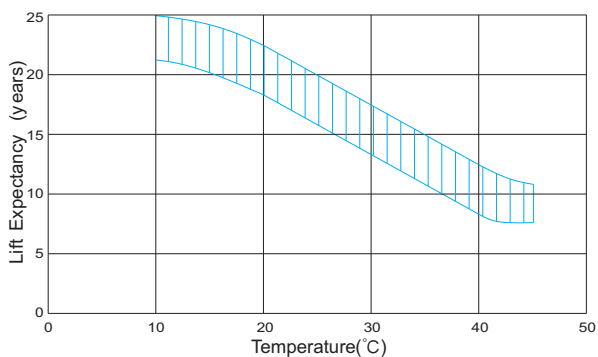
## Temperature Effects on Capacity



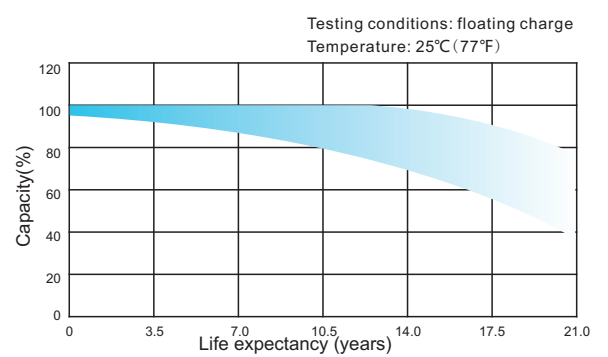
## Storage Characteristics



## Effect of Temperature on Long Term Life



## Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, Ritar reserves the right to explain and update the latest information.