

# OPzV2-2000<sub>(2V2000Ah)</sub>



OPzV series is Valve Regulated Lead Acid battery that adopts immobilized GEL and Tubular Plate technology to offer high reliability and performance. The Battery is designed and manufactured according to DIN standards and with die-casting positive grid and patented formula of active material OPzV series exceeds DIN standard values with more than 20 years floating design life at 25 °C and It is the best solution for cyclic use under extreme operating conditions.

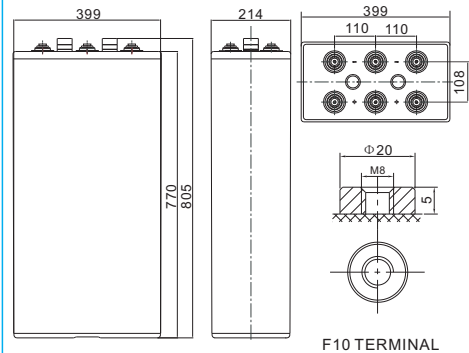


## Specification

<b>Cells Per Unit</b>	1
<b>Voltage Per Unit</b>	2
<b>Nominal Capacity</b>	2000Ah@10hr-rate to 1.80V per cell @25°C
<b>Weight</b>	Approx. 142.5 Kg (Tolerance ±3.0%)
<b>Internal Resistance</b>	Approx. 0.44 mΩ
<b>Terminal</b>	F10(M8)
<b>Max. Discharge Current</b>	7000A (5 sec)
<b>Design Life</b>	20 years (floating charge)
<b>Max. Charging Current</b>	400.0 A
<b>Reference Capacity</b>	C3 1536.0AH C5 1735.5AH C10 2000.0AH C20 2136.0AH
<b>Float Charging Voltage</b>	2.25 V~2.30 V @ 25°C Temperature Compensation: -3mV/°C/Cell
<b>Cycle Use Voltage</b>	2.37 V~2.40 V @ 25°C Temperature Compensation: -4mV/°C/Cell
<b>Operating Temperature Range</b>	Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°C~60°C
<b>Normal Operating Temperature Range</b>	25°C ±5°C
<b>Self Discharge</b>	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 2% at 20°C. Please charged batteries before using.
<b>Container Material</b>	A.B.S. UL94-HB, UL94-V0 Optional.

## Dimensions

Unit: mm



Length	399±2mm (15.7 inches)
Width	214±2mm (8.43 inches)
Height	770±2mm (30.3 inches)
Total Height	805±2mm (31.7 inches)
Torque Value	10~12 N*m

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

F.V/ Time	10min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	2261	2003	1574	1132	722.4	538.2	361.4	249.5	209.2	109.8
1.65V	2053	1803	1426	1115	711.0	531.9	357.9	247.8	207.5	108.9
1.70V	1911	1708	1371	1086	699.5	522.3	352.2	245.0	205.7	108.0
1.75V	1703	1565	1296	1041	682.3	512.0	347.1	241.5	203.5	106.8
1.80V	1439	1399	1215	1001	659.4	500.6	340.3	237.5	200.0	105.0
1.85V	1170	1155	1044	892.9	602.1	460.3	315.7	222.1	187.5	98.44

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

F.V/ Time	10min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	3650	3227	2657	2121	1370	1029	700.0	489.4	412.5	216.6
1.65V	3557	3278	2618	2099	1359	1023	694.2	487.0	410.3	215.4
1.70V	3372	3151	2543	2059	1336	1006	688.5	482.5	406.8	213.6
1.75V	3059	2929	2426	1991	1307	988.7	677.1	477.4	402.8	211.5
1.80V	2631	2655	2300	1928	1279	971.7	665.8	470.4	397.2	208.5
1.85V	2178	2224	1993	1723	1170	897.8	620.2	440.1	372.5	195.6

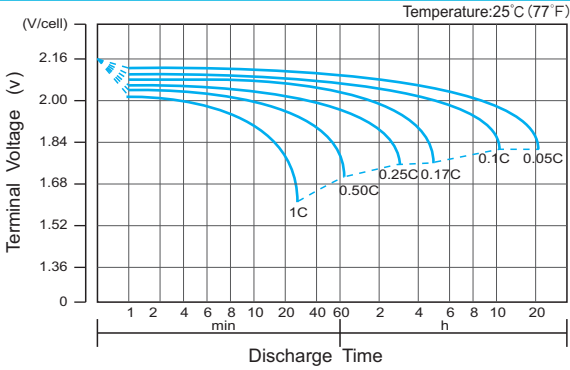
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

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.

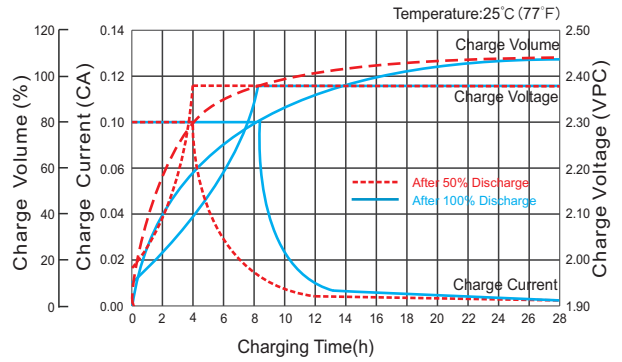
# OPzV2-2000(2V2000Ah)



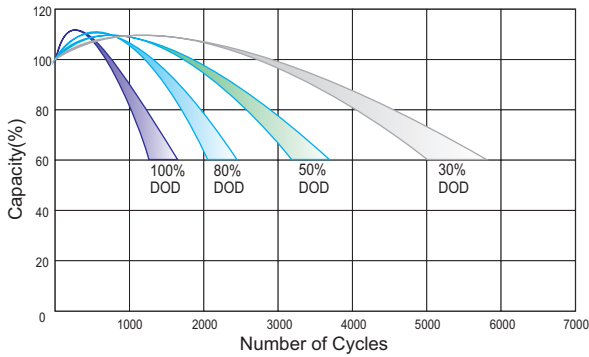
## Discharge Characteristics Curve



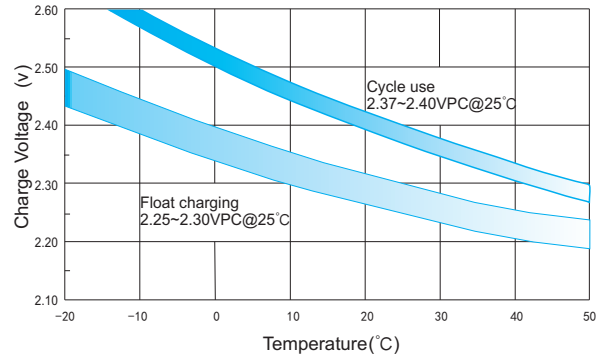
## Charge Characteristic Curve for Cycle Use(IU)



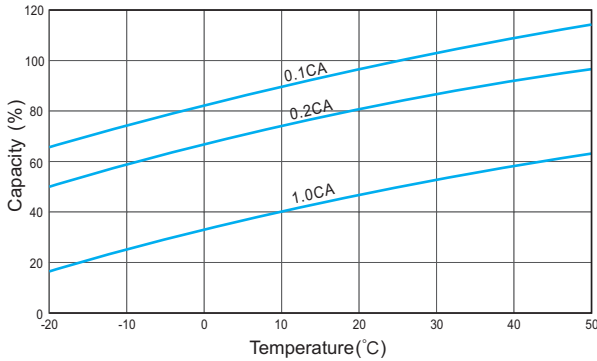
## Cycle Life in Relation to Depth of Discharge



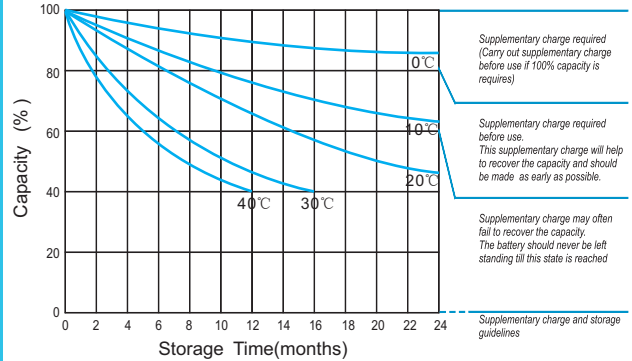
## Relationship Between Charging Voltage and Temperature



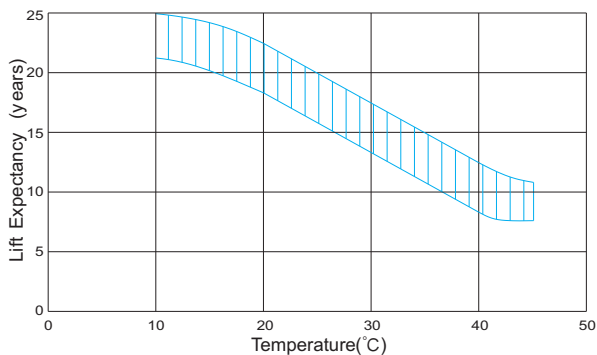
## Temperature Effects on Capacity



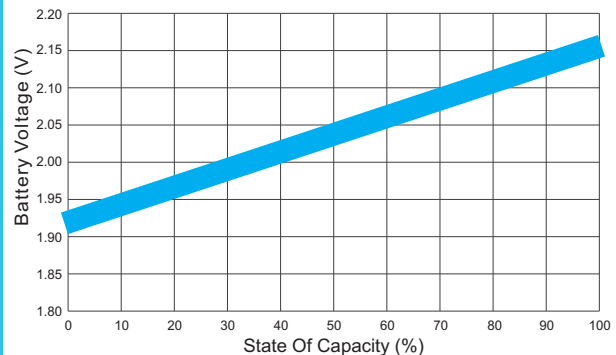
## Storage Characteristics



## Effect of Temperature on Long Term Life



## Relationship of OCV And State of Charge(20°C)



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