

# OPzS2-100(2V100Ah)



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.

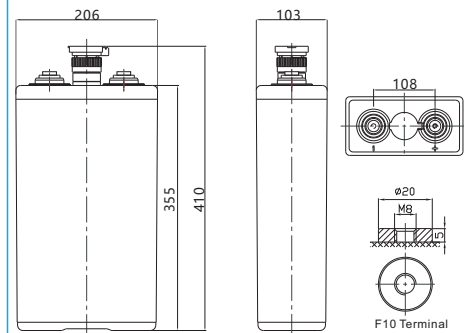
## Specification

<b>Cells Per Unit</b>	1
<b>Voltage Per Unit</b>	2
<b>Nominal Capacity</b>	100Ah@10hr-rate to 1.80V per cell @25°C
<b>Weight</b>	Without Electrolyte 9.5kg/With Electrolyte 14.3kg
<b>Internal Resistance</b>	Approx. 1.0 mΩ
<b>Terminal</b>	F10(M8)
<b>Max. Discharge Current</b>	500A (5 sec)
<b>Design Life</b>	20 years (floating charge)
<b>Max. Charging Current</b>	15.0 A
<b>Reference Capacity</b>	C3 81.3AH C5 90.5AH C10 100.0AH C20 121.0AH
<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>	SAN UL94-HB, UL94-V0 Optional.



## Dimensions

Unit: mm



Length	103±2mm (4.01 inches)
Width	206±2mm (8.11 inches)
Height	355±2mm (14.0 inches)
Total Height	410±2mm (16.1 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	105.5	68.1	40.3	29.3	22.6	19.0	16.5	13.0	10.9	6.30
1.65V	102.3	64.1	39.0	28.6	22.3	18.7	16.3	12.9	10.8	6.24
1.70V	94.5	62.0	37.9	28.0	21.9	18.4	16.1	12.8	10.7	6.17
1.75V	84.8	57.9	36.3	27.1	21.6	18.1	15.8	12.6	10.5	6.05
1.80V	76.6	51.7	33.6	25.5	20.6	17.3	15.1	12.0	10.0	5.75
1.85V	63.9	44.3	30.0	23.1	19.0	16.0	14.0	11.2	9.37	5.39

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

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	178.5	116.1	73.7	55.0	43.7	36.7	32.1	25.5	21.7	12.5
1.65V	175.5	111.2	71.7	53.9	43.2	36.3	31.8	25.3	21.6	12.4
1.70V	166.7	110.0	69.9	52.8	42.5	35.9	31.5	25.1	21.4	12.3
1.75V	153.6	105.3	67.7	51.6	41.9	35.3	31.0	24.8	21.1	12.2
1.80V	142.6	96.5	63.6	48.9	40.2	33.9	29.8	23.8	20.3	11.7
1.85V	122.2	85.0	58.1	45.0	37.2	31.5	27.7	22.4	19.1	11.0

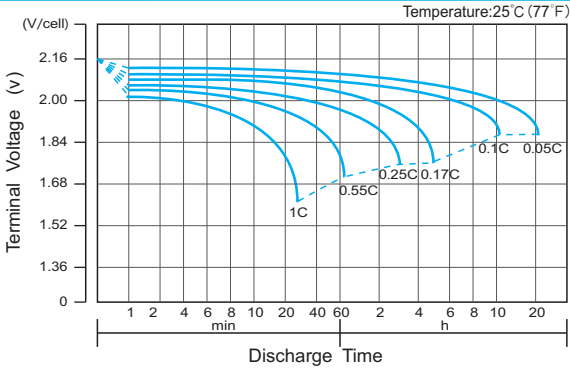
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

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.

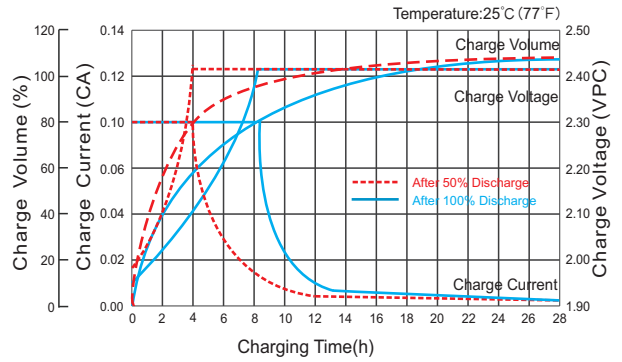
# OPzS2-100(2V100Ah)



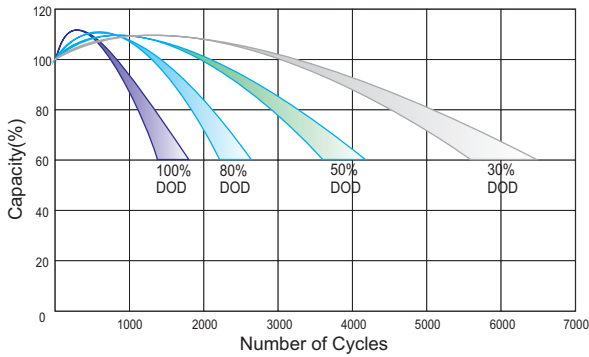
## Discharge Characteristics Curve



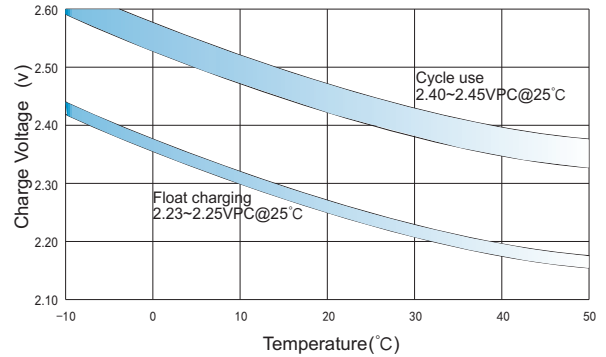
## Charge Characteristic Curve for Cycle Use(IU)



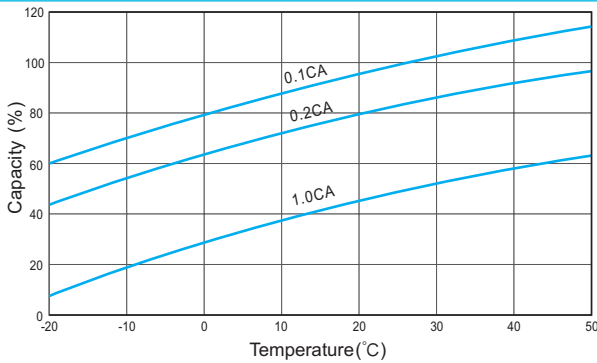
## Cycle Life in Relation to Depth of Discharge



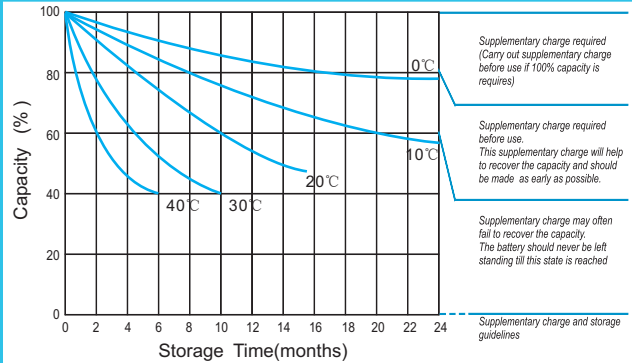
## Relationship Between Charging Voltage and Temperature



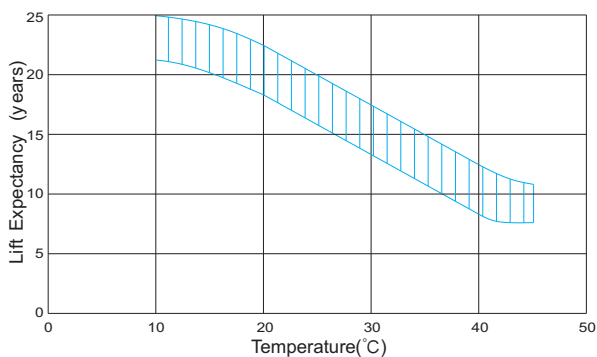
## Temperature Effects on Capacity



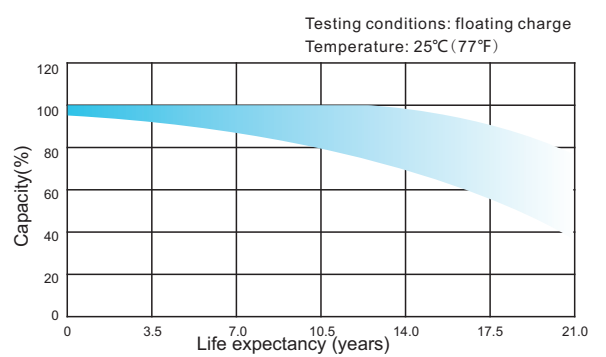
## Storage Characteristics



## 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.