

# OPzS2-1200(2V1200Ah)



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.

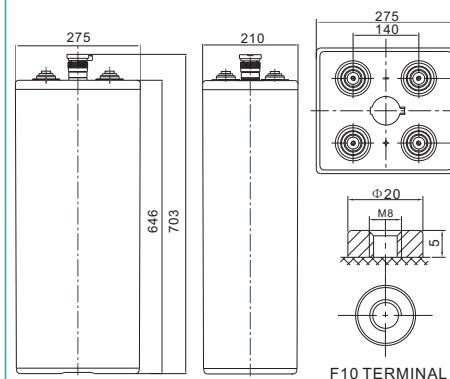


## Specification

<b>Cells Per Unit</b>	1
<b>Voltage Per Unit</b>	2V
<b>Nominal Capacity</b>	1200Ah@10hour-rate to 1.80V per cell @25°C
<b>Weight</b>	Without Electrolyte 72.0 kg(Tolerance ±5%) With Electrolyte 91.8kg (Tolerance ±5%)
<b>Internal Resistance</b>	≤0.23 mΩ (Full Charge Condition @25°C)
<b>Terminal</b>	Default F10(M8)
<b>Max. Discharge Current</b>	4500A (5 sec)
<b>Design Life</b>	20 years
<b>Max. Charging Current</b>	150.0 A
<b>Reference Capacity</b>	C <sub>3</sub> 917.1Ah C <sub>5</sub> 1038.5Ah C <sub>10</sub> 1200.0Ah C <sub>20</sub> 1452.0Ah
<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>	S.A.N. UL94-HB, UL94-V0 Optional.

## Dimensions

Unit: mm



Length	275±2mm (10.8 inches)
Width	210±2mm (8.27 inches)
Height	646±2mm (25.4 inches)
Total Height	703±2mm (27.7 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	1266	816.7	483.7	352.2	271.5	227.7	198.4	156.1	131.4	75.5
1.65V	1228	768.6	467.9	343.6	267.7	224.6	195.9	154.8	130.1	74.8
1.70V	1134	744.6	454.8	335.6	263.1	221.2	193.4	153.6	128.8	74.1
1.75V	1017	695.1	435.2	325.2	258.8	217.2	189.6	151.1	126.3	72.6
1.80V	918.8	620.0	403.1	305.7	247.4	207.7	181.4	144.1	120.0	69.0
1.85V	766.2	531.4	360.5	277.5	228.4	192.1	168.1	134.7	112.4	64.7

### Constant Power Discharge Characteristics : W/Cell(25°C)

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.60V	2142	1393	883.9	660.1	524.8	440.9	385.5	305.9	261.0	150.1
1.65V	2106	1334	860.2	646.6	518.1	436.0	381.7	303.4	259.8	149.3
1.70V	2000	1321	839.1	633.5	510.1	430.2	377.9	300.9	257.3	147.9
1.75V	1844	1264	812.8	619.0	503.4	424.0	371.6	297.1	253.6	145.8
1.80V	1711	1158	762.7	586.7	482.5	406.8	357.0	285.8	243.2	139.8
1.85V	1467	1020	696.9	539.6	447.0	377.6	332.4	269.4	229.1	131.7

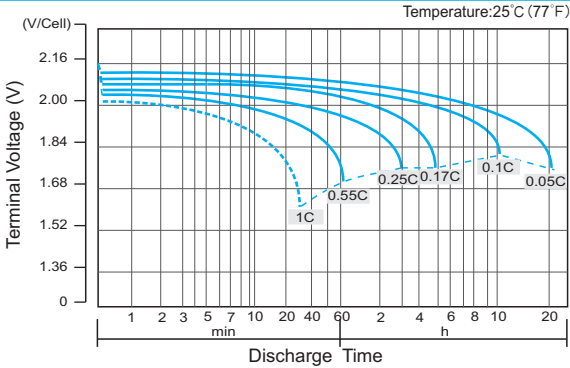
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

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.

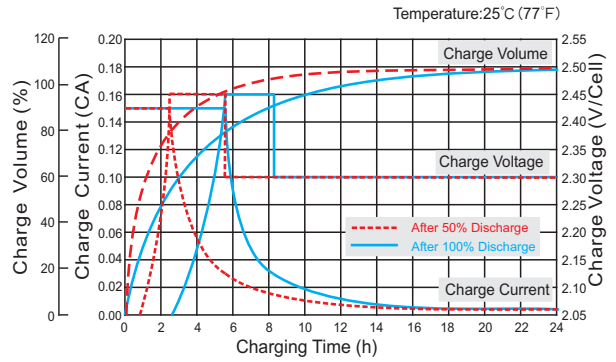
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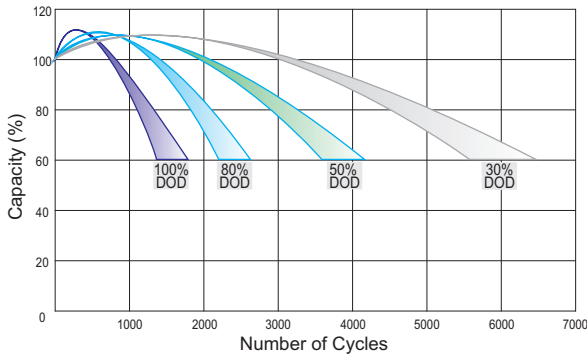
## Discharge Characteristics Curve



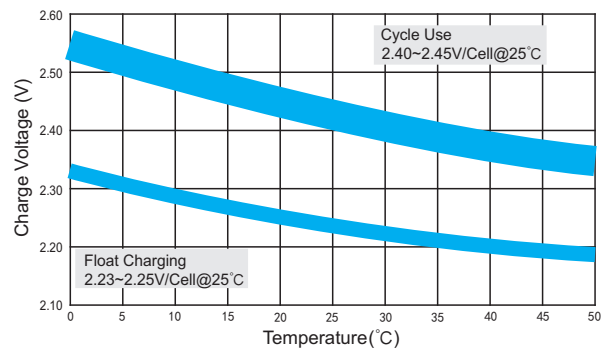
## Charge Characteristic Curve for Cycle Use(IUU)



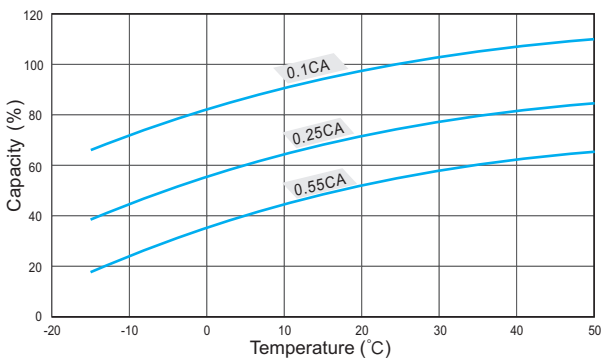
## Cycle Life in Relation to Depth of Discharge



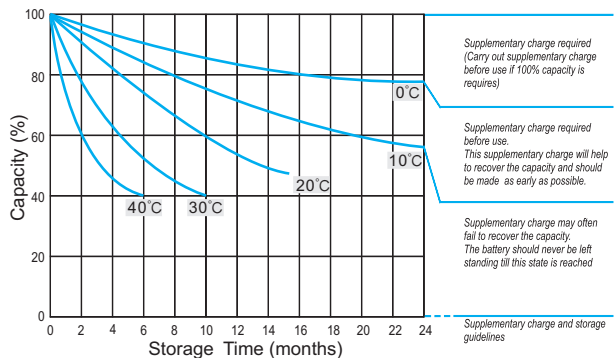
## Relationship Between Charging Voltage and Temperature



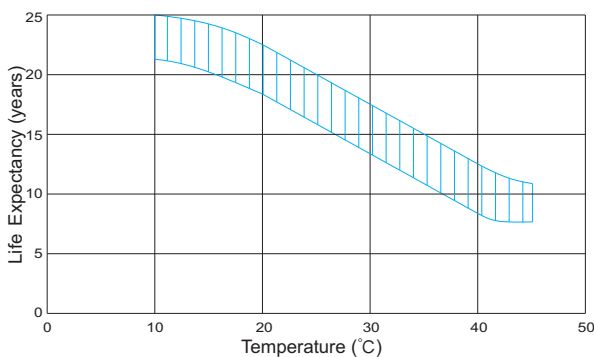
## Temperature Effects on Capacity



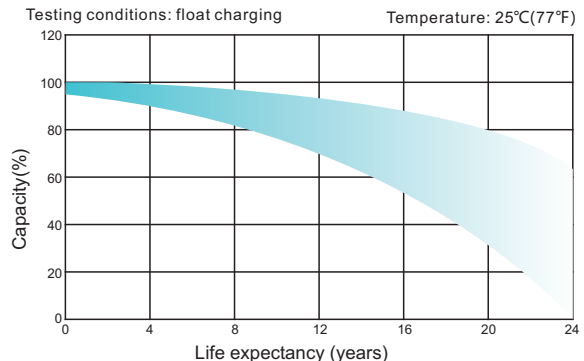
## Storage Characteristics



## 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.