

OPzS Deep Cycle Tubular Flooded Battery

OPzS2-1200

CSPower 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 DIN40736-2/IEC60896-11 positive spine and patent formula of die-casting active material. OPzS series exceeds standard values with more DIN40736-2/IEC60896-11 than 20 years floating design even more suitable for life at 25°C and is cyclic use(PV/solar, traction etc) under extreme operating conditions.

2V
1200Ah

Flooded
Technology

Tubular
Plate



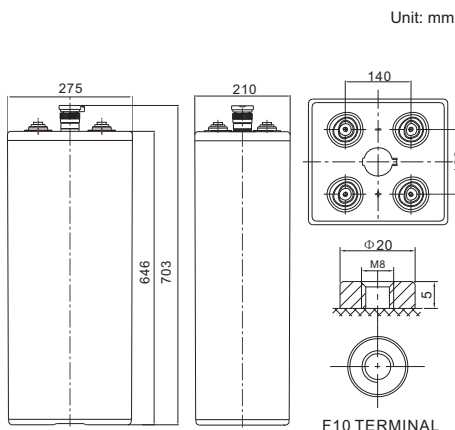
Applications

- Solar & Wind Power system
- Nuclear power station
- Telecom backup power supply
- energy saving requirements
Emergency Power System

General Features

- ✓ It can discharge at -40°C~70°C, Charge at 0~50°C
- ✓ Long life expectancy of 20+ years in floating condition
- ✓ Adopts quality silicon nano gel electrolyte
- ✓ Excellent deep discharge recovery capability
- ✓ Deep cycle performance: up to 3300

Dimensions & Weight



Unit: mm

Length	275±1mm (10.8 inches)
Width	210±1mm (8.27 inches)
Height	646±1mm (25.4 inches)
Total Height	703±1mm (27.7 inches)
Torque Value	10~12 N·m

Technical Specifications

Cells Per Unit	1
Voltage Per Unit	2
Nominal Capacity	1200Ah@10hr-rate to 1.85V per cell @25°C
Weight	Without Electrolyte 68.0kg/With Electrolyte 91.8kg
Internal Resistance	Approx. 0.23 mΩ
Terminal	F10(M8)
Max. Discharge Current	4500A (5 sec)
Design Life	20 years (floating charge)
Maximum Charging Current	150.0 A
Reference Capacity	C24 1436.4AH C48 1616.0AH C72 1696.7AH C100 1735.7AH C120 1770.4AH C240 1800.0AH
Float Charging Voltage	2.23 V~2.25 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	2.40 V~2.45 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -15°C~50°C Charge: 0°C~40°C Storage: -15°C~50°C
Normal Operating Temperature Range	25°C ±5°C
Self Discharge	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 3.5% at 25°C. Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

Battery Discharge Table

Discharge Constant Current per Cell (Amperes at 25° C)

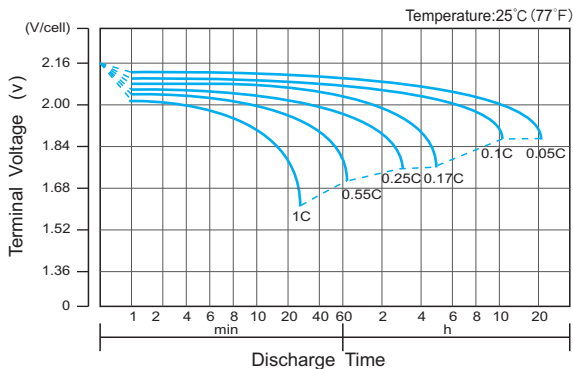
F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90V	638.5	506.1	356.9	272.0	215.5	191.5	167.6	130.8	112.1	64.49
1.87V	713.8	558.1	382.9	289.6	227.4	202.6	177.7	136.9	117.2	67.37
1.83V	817.6	622.9	415.3	309.8	239.4	211.7	184.0	143.0	122.2	70.29
1.80V	908.5	674.9	430.9	318.9	244.2	216.6	189.0	146.7	126.0	72.45
1.75V	1012	722.9	450.3	329.1	248.2	220.5	192.8	149.1	128.5	73.89
1.70V	1116	746.2	463.3	336.9	252.6	223.9	195.3	150.3	129.8	74.64
1.65V	1151	793.0	478.9	345.3	256.2	227.0	197.8	151.6	131.0	75.36
1.60V	1200	820.2	497.1	356.8	263.3	231.8	200.3	152.8	132.3	76.08

Discharge Constant Power per Cell (Watts at 25° C)

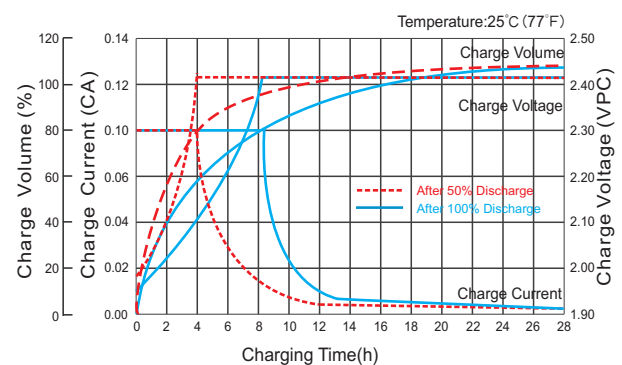
F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90V	1222	972	690.0	529.0	421.7	376.5	331.4	261.6	228.6	131.4
1.87V	1345	1055	731.7	559.4	444.5	397.4	350.3	272.6	238.3	137.0
1.83V	1506	1150	778.7	591.1	466.0	413.8	361.6	282.3	246.9	141.9
1.80V	1646	1227	804.7	606.8	474.9	422.7	370.4	288.4	253.0	145.5
1.75V	1786	1282	830.8	621.0	481.2	428.9	376.7	292.1	256.7	147.6
1.70V	1915	1295	851.7	634.0	488.8	434.7	380.5	294.6	259.1	149.0
1.65V	1947	1353	875.2	647.1	495.1	439.5	384.3	297.0	260.3	149.7
1.60V	1971	1394	896.0	663.1	507.8	447.4	386.8	298.2	261.6	150.4

Performance Characteristics

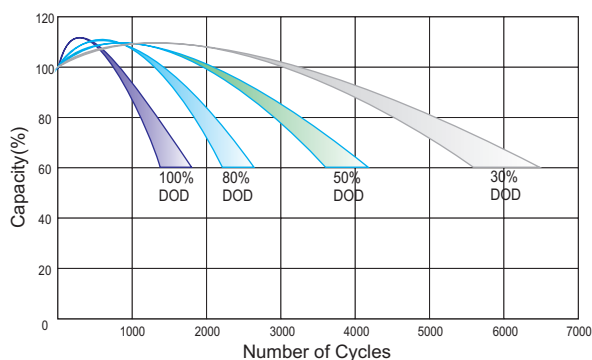
Discharge Characteristics Curve



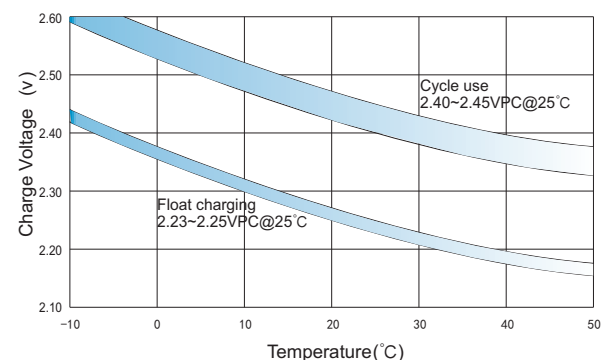
Charge Characteristic Curve for Cycle Use(IU)



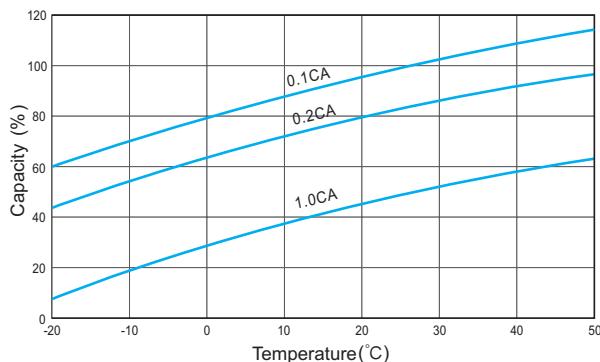
Cycle Life in Relation to Depth of Discharge



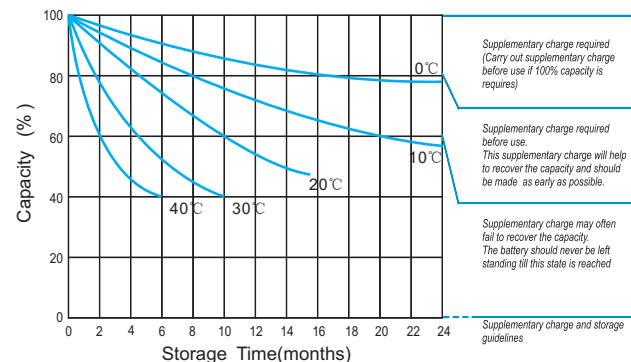
Relationship Between Charging Voltage and Temperature



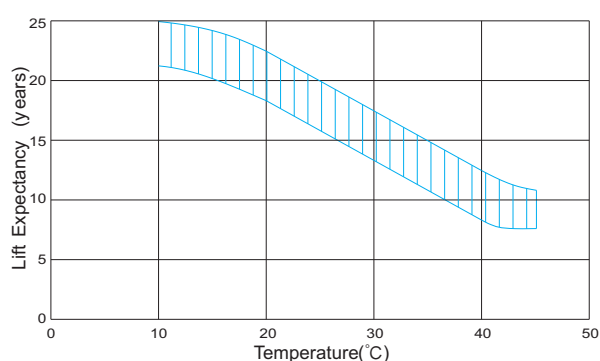
Temperature Effects on Capacity



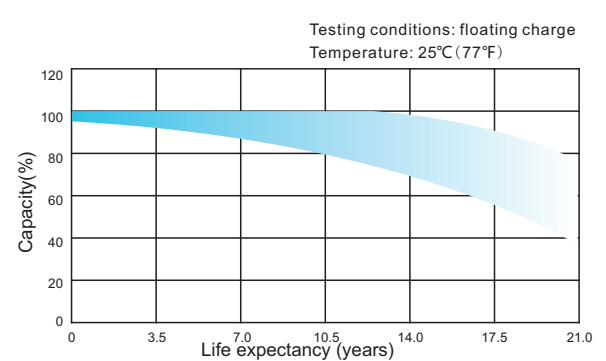
Storage Characteristics



Effect of Temperature on Long Term Life



Life Characteristics Of Standby Use



Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact **CSPower** for the latest information.

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