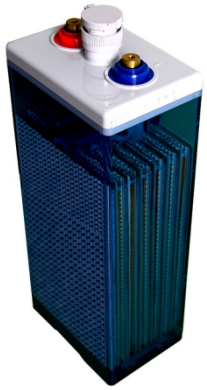
CSPower Battery: Constant, Safe Power For You

OPzS Deep Cycle Tubular Flooded Battery — OPzS2-420

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℃ and is cyclic use(PV/solar, traction etc) under extreme operating conditions.

2V 420Ah | *Flooded Technology* | *Tubular Plate*



ISO 9001 ISO 14001 OHSAS 18001

Applications

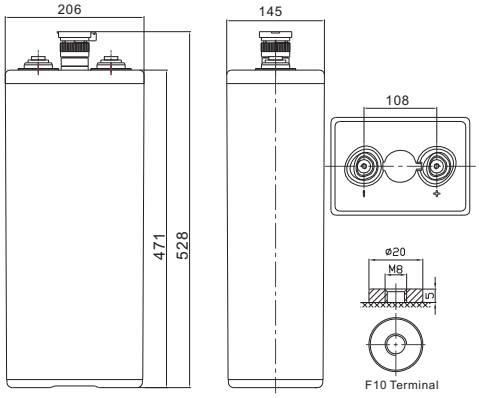
- Solar & Wind Power system
- Nuclear power station
- Telecom backup power supply
- energy saving requirements Emergency Power System

General Features

- ✓ It can discharge at -40℃-70℃, Charge at 0-50℃
- ✓ 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	145±1mm (5.71 inches)
Width	206±1mm (8.11 inches)
Height	471±1mm (18.5 inches)
Total Height	528±1mm (20.8 inches)
Torque Value	10~12 N*m

Technical Specifications

Cells Per Unit	1
Voltage Per Unit	2
Nominal Capacity	420Ah@10hr-rate to 1.85V per cell @25℃
Weight	Without Electrolyte 24.5kg/With Electrolyte 33.6kg
Internal Resistance	Approx. 0.58 mΩ
Terminal	F10(M8)
Max. Discharge Current	1800A (5 sec)
Design Life	20 years (floating charge)
Maximum Charging Current	63.0 A
Reference Capacity	C24 502.7AH C48 525.0AH C72 546.0AH C100 567.0AH C120 588.0AH C240 609.0AH
Float Charging Voltage	2.23 V~2.25 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	2.40 V~2.45 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -15℃~50℃ Charge: 0℃~40℃ Storage: -15℃~50℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3.5% at 25℃.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	223.5	177.1	124.9	95.21	75.41	67.03	58.65	45.77	39.25	22.57
1.87V	249.8	195.3	134.0	101.4	79.60	70.90	62.18	47.91	41.01	23.58
1.83V	286.2	218.0	145.4	108.4	83.79	74.09	64.39	50.05	42.78	24.60
1.80V	318.0	236.2	150.8	111.6	85.47	75.80	66.15	51.33	44.10	25.36
1.75V	354.3	253.0	157.6	115.2	86.88	77.17	67.47	52.19	44.98	25.86
1.70V	390.6	261.2	162.2	117.9	88.40	78.37	68.36	52.62	45.42	26.12
1.65V	402.9	277.5	167.6	120.8	89.66	79.45	69.24	53.04	45.86	26.38
1.60V	420.2	287.1	174.0	124.9	92.17	81.14	70.12	53.47	46.31	26.63

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

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90V	427.7	340.1	241.5	185.1	147.6	131.8	116.0	91.54	79.99	46.00
1.87V	470.7	369.3	256.1	195.8	155.6	139.1	122.6	95.39	83.42	47.96
1.83V	527.3	402.6	272.5	206.9	163.1	144.8	126.6	98.81	86.41	49.68
1.80V	576.1	429.6	281.7	212.4	166.2	148.0	129.7	101.0	88.55	50.92
1.75V	625.0	448.7	290.8	217.4	168.4	150.1	131.9	102.2	89.83	51.65
1.70V	670.1	453.3	298.1	221.9	171.1	152.2	133.2	103.1	90.69	52.14
1.65V	681.6	473.4	306.3	226.5	173.3	153.8	134.5	103.9	91.12	52.39
1.60V	689.8	488.0	313.6	232.1	177.7	156.6	135.4	104.4	91.54	52.63

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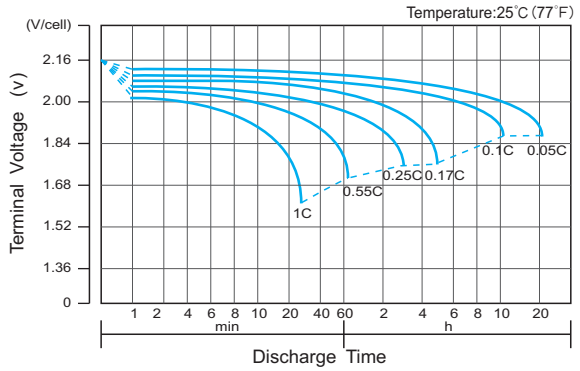
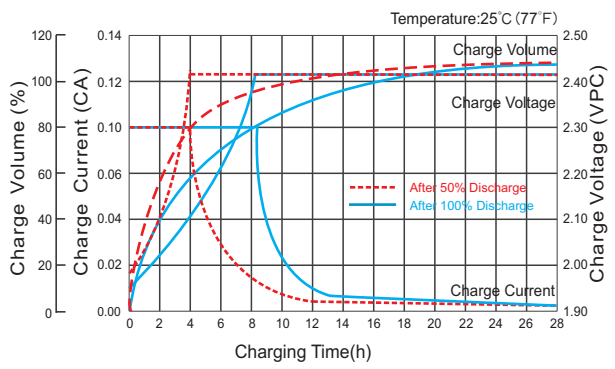
Performance Characteristics

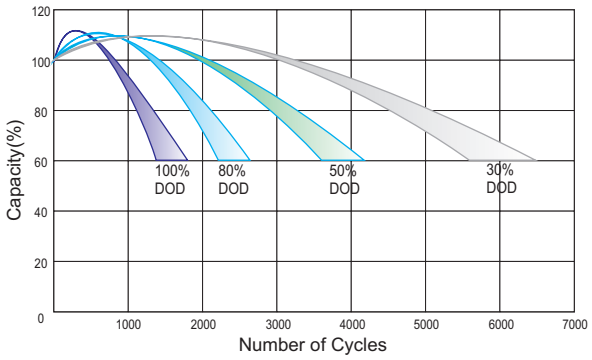
Discharge Characteristics Curve



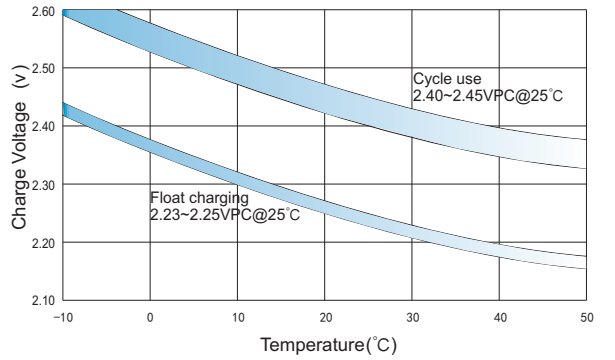
Charge Characteristic Curve for Cycle Use(IU)



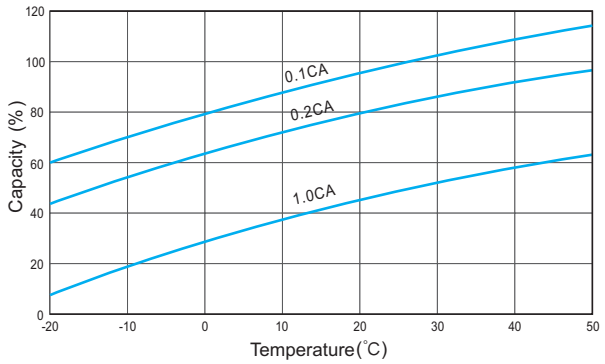
Cycle Life in Relation to Depth of Discharge



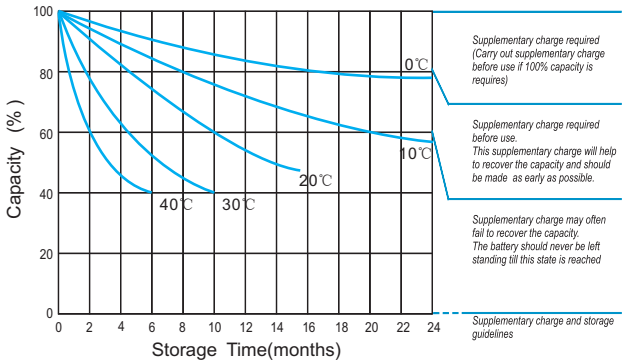
Relationship Between Charging Voltage and Temperature



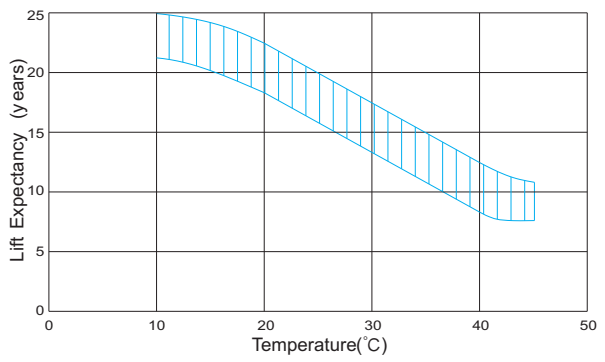
Temperature Effects on Capacity



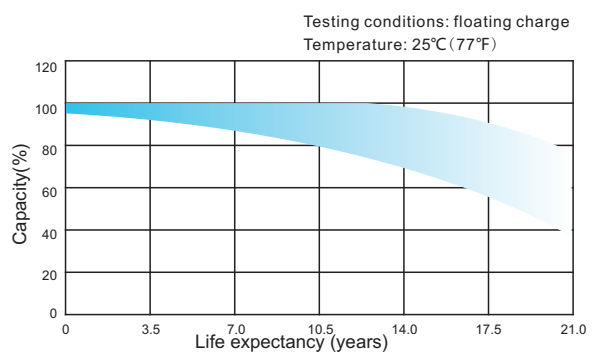
Storage Characteristics



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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