



OPzV Series Tubular GEL Battery

OPzV500

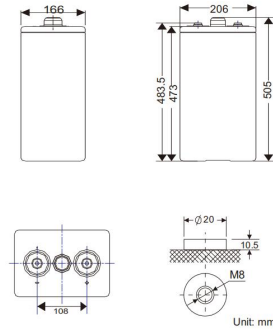
General Features

- ▶ 20 years design life
- ▶ adopt tubular plate with GEL technology
- ▶ Gas phase SiO₂ colloidal battery technology
- ▶ PVC-SiO₂ partition
- ▶ ABS material battery case
- ▶ Widely used in communication systems, military fields, power systems, broadcasting and television systems, etc



Specification	
Rated Voltage	2V
Nominal Capacity(C10, 1.80V/cell)	500Ah
Terminal	M8
Approx. Weight	36.5±3% kg(80.5lbs)
Container Material	ABS
short-circuit current	3846A
Internal resistance(25°C:)	Approx 0.52 mΩ
Nominal Operating Temp. Range	25±5°C (77±5°F)
Self discharge	≤3%/month @ 25°C
Charge voltage(25°C)	
Max.Charging Current(25°C)	125.0A
Float charge:	2.23~2.25V/cell (-3mV/ °C)
Equalize charge:	2.30~2.40V/cell (-4mV/ °C)
Cycle charge:	2.35~2.45V/cell(-5mV/ °C)
Effect of temp to Capacity	
40°C (104°F)	105%
25°C (77°F)	100%
0°C (32°F)	85%

Dimension:166(L)×206(W) ×473(H)×505(TH)
Unit: mm



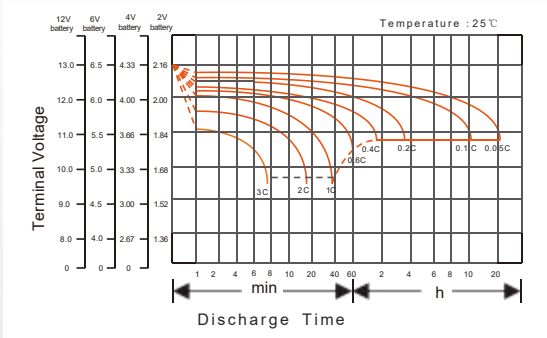
Rated Capacity(25°C)	
10Hour Rate (50.0A to 1.8V)	500.0Ah
5Hour Rate (84.6A to 1.8V)	423.0Ah
3Hour Rate (124A to 1.8V)	372.0Ah
1Hour Rate (243A to 1.8V)	243.0Ah
Operating Temperature	
Discharge:	-15 ~50°C(5~ 122°F)
Charge :	-15 ~50°C(5~ 122°F)
Storage:	-20 ~40°C(-4~ 104°F)

Constant Current Discharge Characteristics Unit:A (25°C,77°F)																
FV/Time	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h	48h	72h	100h
1.60V	515	403	297	186	134	106	90.3	79.4	64.1	52.5	44.3	27.1	23.5	12.87	9.28	7.18
1.65V	485	383	280	181	131	104	89.3	78.5	63.6	52.2	44.1	26.9	23.3	12.87	9.16	7.18
1.70V	458	368	275	176	129	103	88.1	77.2	62.9	52.0	43.8	26.7	23.2	12.62	8.91	6.93
1.75V	429	348	257	171	126	101	86.6	75.7	61.6	51.2	43.6	26.5	22.8	12.62	8.86	6.93
1.80V	399	325	243	166	124	99	84.6	73.8	60.1	50.0	42.6	25.7	22.3	12.38	8.42	6.68
1.85V	341	272	206	149	107	87	75.4	66.3	55.5	47.5	42.1	25.3	21.5	11.63	7.92	6.44
1.90V	282	225	176	127	96	81	70.2	61.3	50.3	42.7	37.9	22.8	19.8	10.89	7.30	5.94
1.95V	221	167	125	94	78	68	55.1	47.2	38.6	34.3	30.2	19.3	17.6	9.41	6.19	4.95

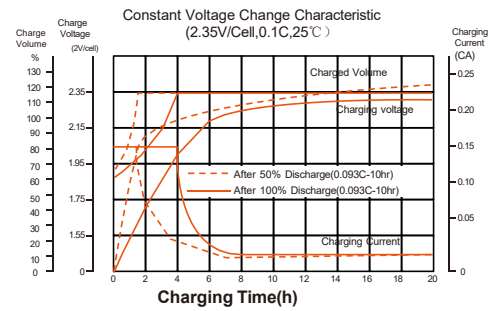
Constant Power Discharge Characteristics Unit: W/cell (25°C ,77°F)																
FV/Time	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h	48h	72h	100h
1.60V	887	711	542	347	252	202	171.5	151.2	122.5	100.5	84.9	52.1	46.8	25.69	18.56	14.31
1.65V	848	674	510	339	249	198	170.0	149.7	121.8	100.2	84.6	51.9	46.5	25.66	18.27	14.28
1.70V	801	647	502	332	245	197	168.3	147.8	120.8	100.0	84.4	51.7	46.3	25.25	17.80	13.86
1.75V	757	620	480	324	241	194	166.1	145.5	118.8	99.0	84.2	51.5	45.5	25.22	17.72	13.85
1.80V	715	595	455	317	238	190	162.9	142.1	116.1	96.6	82.4	50.1	44.8	24.89	16.93	13.44
1.85V	615	500	392	287	207	170	146.7	129.2	108.2	92.9	82.2	49.7	43.8	23.66	16.11	13.09
1.90V	512	429	338	247	187	158	137.6	120.2	98.8	84.0	74.5	45.1	41.1	22.60	15.15	12.33
1.95V	412	319	240	184	153	134	108.2	92.8	76.0	67.7	59.6	38.4	36.5	19.55	12.87	10.30

Disclaimer: Manufacturers have the right to self-modify the parameters of the product updates, please keep in touch with manufacturers to obtain the latest information.

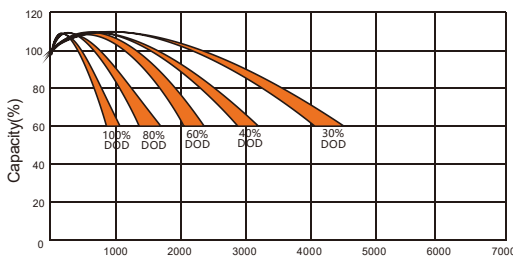
Discharge Characteristics Curve



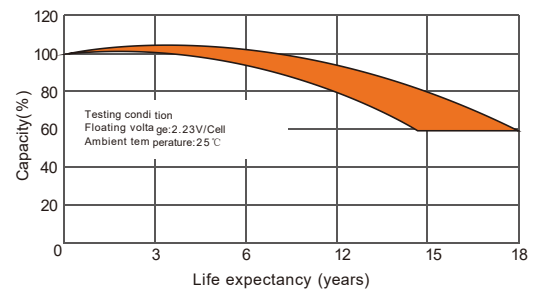
Charging Characteristics Curve



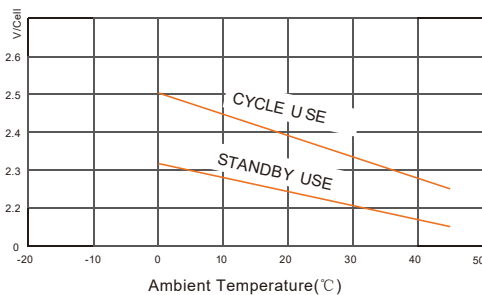
Cycle life of Different DOD



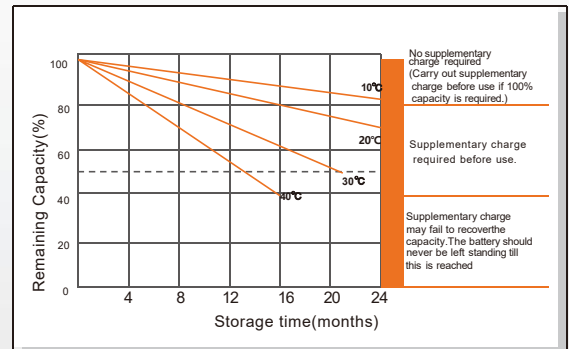
Float charging service life Curve



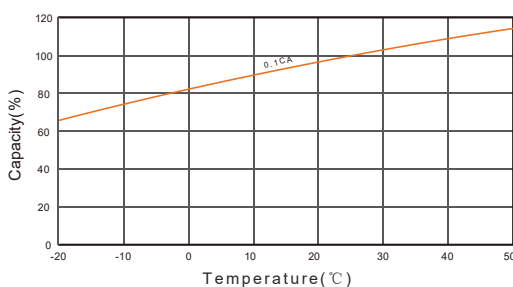
Charging voltage and temperature relationship



Self-discharge Characteristics



Temperature Effects in Relation to Battery Capacity



Temperature Effects on Long Term Float Life

