

Tubular Gel Technology
OPzV Series

7 OPzV 500
2V500Ah(10hr)

Complying standards:

IEC60896-21/22: 2004 IEC61427-2014
YD/T1360-2005 DIN43539-T5
DIN40742:1999 GB/T 22473-2008



The ABT OPzV series are valve regulated lead-acid cells which use a combination of tubular positive plate woven gauntlets, pasted negative plate design, and special GEL electrolyte filling techniques, which assure the long life and excellent reliability of the battery. This series is widely used for large range of applications including telecommunication, power generating stations and distribution systems, power supply system, energy storage, UPS system, railway, airport and seaport signaling, emergency lighting, solar and it's suitable for harsh environment and poor power supply condition.

Mechanical Characteristics

	SI Unit	EN Unit
Length	166mm	6.54inch
Width	206mm	8.11inch
Height	471mm	18.54inch
Total Height	503.5mm	19.82inch
Approx. Weight	37.3kg	82.06lbs

Type of material for container and lids:
ABS Standard (FV0 Optional)

Product Characteristics

- Design life: 20 years at 68°F (20°C)
- Very long life according to EUROBAT Classification
- Up to 1500 deep discharge cycles
- High discharge performance
- High gas recombination efficiency
- Maximum charge efficiency
- GEL state electrolyte prevents leakage and layering
- Low resistance PVC-SiO2 micro-porous separator ensure Low self-discharge rate
- Easy installation vertical or horizontal

Performance Characteristics

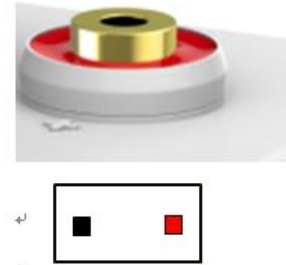
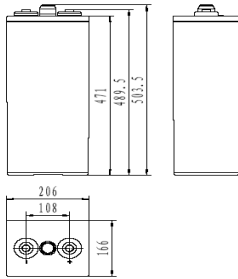
- Rated voltage: 2V (1 Cell)
- Rated capacity at 68°F(20°C)

10h rate (50A, 1.80V)	500Ah
5h rate (85A, 1.80V)	425Ah
1h rate (250A, 1.80V)	250Ah
- Internal resistance: 0.50mΩ when fully charged at 68°F(20°C)
- Average self-discharge rate: ≤3% per month 68°F(20°C)
- Maximum discharge current: 2852A(3s) at 68°F(20°C)
- Working temperature range:

Discharge:	-25~60°C
Charge:	-10~60°C
Storage:	-25~60°C
- Charging method: with constant voltage at 68°F(20°C)

Maximum charge current:	100A
Temperature compensation:	-3.5mV/°C/piece
Cycle use:	2.37V/ piece
Standby use:	2.27V/ piece

Dimensions/Terminal



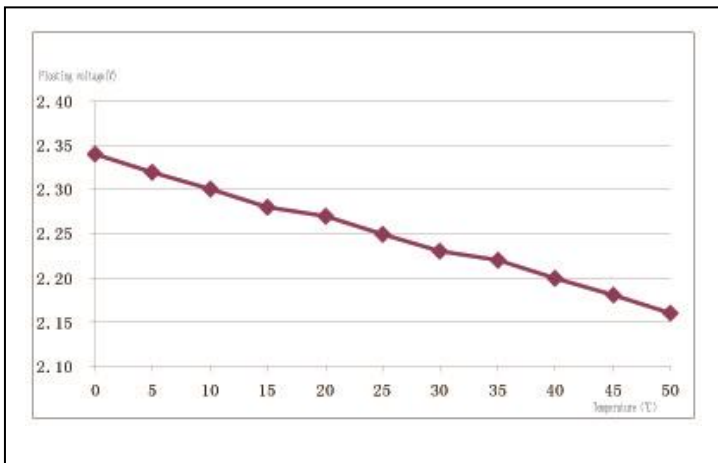
Constant Current Discharge Data (Ampere at 20°C/68 °F)

End Volt	5min	10min	15min	20min	30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h	120h	240h
1.65	696	647	590	513	414	288	190.3	147.2	101.3	85.8	65.0	52.4	28.6	24.57	13.50	6.99	5.86	3.00
1.70	643	604	548	487	399	275	185.0	139.3	95.8	81.0	63.7	51.7	28.1	23.91	13.32	6.93	5.81	2.94
1.75	604	577	530	460	373	263	181.4	132.0	90.8	78.0	61.2	50.9	27.7	23.46	13.15	6.86	5.76	2.90
1.80	569	551	508	442	356	250	172.9	125.0	85.0	72.7	58.8	50.0	27.0	23.06	13.00	6.79	5.70	2.87
1.85	544	514	480	418	329	238	164	118.3	81.5	70.2	55.7	48.7	26.1	22.3	12.82	6.67	5.61	2.83

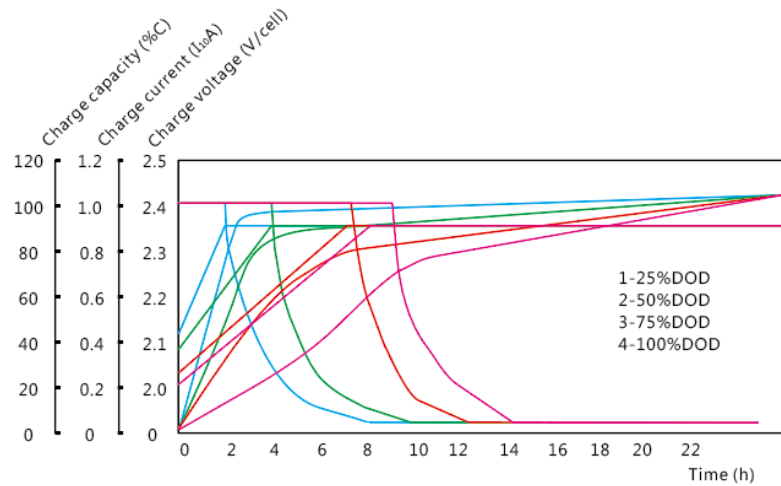
Constant Power Discharge Data (Watts per cell at 20°C/68 °F)

End Volt	5min	10min	15min	20min	30min	1h	2h	3h	5h	6h	8h	10h	20h	24h	48h	100h	120h	240h
1.65	1180	1077	979	881	736	498.8	328.7	246.2	201.2	170.2	136.9	110.4	58.7	49.29	27.14	14.07	11.79	6.07
1.70	1133	1035	932	842	706	483.3	316.2	237.5	194.0	164.3	132.1	109.0	57.5	48.00	26.57	13.93	11.66	5.93
1.75	1059	993	890	808	681	471.4	308.7	232.5	189.3	159.5	128.6	105.0	56.7	47.14	26.36	13.79	11.53	5.83
1.80	992	905	802	770	642	461.9	300.0	228.7	176.2	148.8	123.8	102.5	55.6	46.00	26.00	13.57	11.43	5.74
1.85	913	790	720	654	570	445.2	288.7	218.7	160.7	141.7	114.9	96.8	53.8	44.86	25.64	13.36	11.31	5.67

Floating Charge Voltage vs. Temperature



Cycle charge characteristic curve (at 20°C/68 °F)



Contact information

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ABT VRLA Battery: Available power range from 26Ah to 3000Ah.

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