

Tubular Gel Technology
OPzV Series

7 OPzV 490
2V490Ah(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)

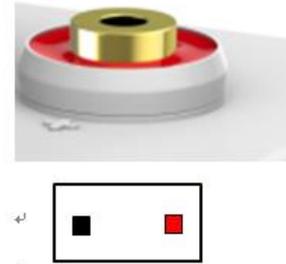
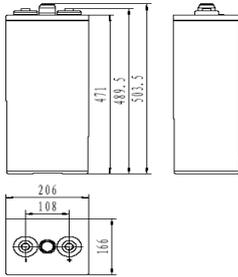
Product Characteristics

- 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 (49A, 1.80V) 490Ah
 - 5h rate (83.3A, 1.80V) 416.5Ah
 - 1h rate (245A, 1.80V) 245Ah
- 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: 98A
 - Temperature compensation: -3.5mV/°C/piece
 - Cycle use: 2.37V/ piece
 - Standby use: 2.27V/ piece

Dimensions/Terminal



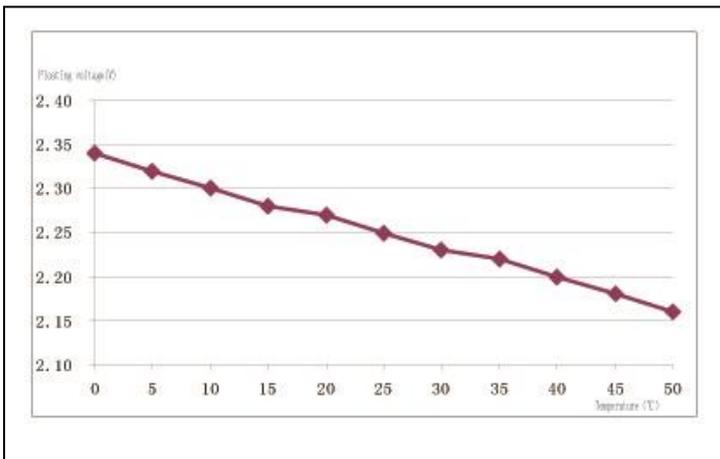
Constant Current Discharge Data (Ampere at 20°C/68 °F)

| End Volt | 5min | 10min | 15min | 20min | 30min | 1h | 2h | 3h | 5h | 6h | 8h | 10h | 20h | 24h | 48h | 100h | 120h | 240h |
|----------|------|-------|-------|-------|-------|-----|-------|-------|------|------|------|------|------|-------|-------|------|------|------|
| 1.65 | 682 | 634 | 578 | 503 | 406 | 283 | 186.5 | 144.2 | 99.3 | 84.1 | 63.7 | 51.4 | 28.0 | 24.08 | 13.23 | 6.85 | 5.74 | 2.94 |
| 1.70 | 630 | 592 | 537 | 477 | 391 | 270 | 181.3 | 136.5 | 93.9 | 79.4 | 62.4 | 50.7 | 27.6 | 23.44 | 13.05 | 6.79 | 5.70 | 2.88 |
| 1.75 | 592 | 566 | 519 | 451 | 365 | 258 | 177.8 | 129.4 | 89.0 | 76.4 | 59.9 | 49.8 | 27.2 | 22.99 | 12.89 | 6.72 | 5.64 | 2.84 |
| 1.80 | 557 | 540 | 498 | 433 | 349 | 245 | 169.4 | 122.5 | 83.3 | 71.2 | 57.7 | 49.0 | 26.5 | 22.60 | 12.74 | 6.65 | 5.59 | 2.81 |
| 1.85 | 533 | 504 | 470 | 410 | 322 | 234 | 160 | 116.0 | 79.9 | 68.8 | 54.6 | 47.7 | 25.6 | 21.9 | 12.56 | 6.54 | 5.50 | 2.77 |

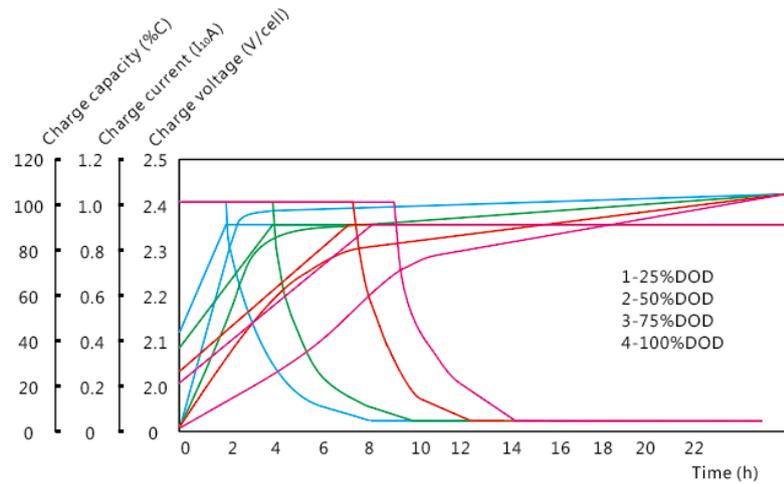
Constant Power Discharge Data (Watts per cell at 20°C/68 °F)

| End Volt | 5min | 10min | 15min | 20min | 30min | 1h | 2h | 3h | 5h | 6h | 8h | 10h | 20h | 24h | 48h | 100h | 120h | 240h |
|----------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|
| 1.65 | 1156 | 1056 | 959 | 863 | 721 | 488.8 | 322.2 | 241.3 | 197.2 | 166.8 | 134.2 | 108.2 | 57.5 | 48.30 | 26.60 | 13.79 | 11.55 | 5.95 |
| 1.70 | 1111 | 1014 | 914 | 825 | 692 | 473.7 | 309.9 | 232.8 | 190.2 | 161.0 | 129.5 | 106.9 | 56.4 | 47.04 | 26.04 | 13.65 | 11.42 | 5.81 |
| 1.75 | 1038 | 973 | 873 | 792 | 667 | 462.0 | 302.6 | 227.9 | 185.5 | 156.3 | 126.0 | 102.9 | 55.5 | 46.20 | 25.83 | 13.51 | 11.30 | 5.71 |
| 1.80 | 972 | 887 | 786 | 755 | 629 | 452.7 | 294.0 | 224.2 | 172.7 | 145.8 | 121.3 | 100.5 | 54.5 | 45.08 | 25.48 | 13.30 | 11.20 | 5.63 |
| 1.85 | 895 | 775 | 706 | 641 | 559 | 436.3 | 283.0 | 214.4 | 157.5 | 138.8 | 112.6 | 94.9 | 52.7 | 43.96 | 25.13 | 13.09 | 11.09 | 5.56 |

Floating Charge Voltage vs. Temperature



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



Contact information

Advanced Battery Technology BV
 Add. New Yorkstraat 14 1175 RD Lijnden Amsterdam, Netherland
 Web: <http://www.abtbatt.com> Email: sales@abtbatt.com

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

Copy right ABT BV,
 all rights reserved.
 (Edition: Feb.,2021)