

OPzV 2-300

2 Volt 300 Ah

OPzV series is a Valve Regulated Lead Acid battery that adopts immobilized GEL and Tubular Plate technology to offer high reliability and performance. The Battery is designed and manufactured according to DIN standards and with die-casting positive grid and patent formula of active material. OPzV series exceeds DIN standard values with more than 20 years floating design life at 25°C and is even more suitable for cyclic use under extreme operating conditions.



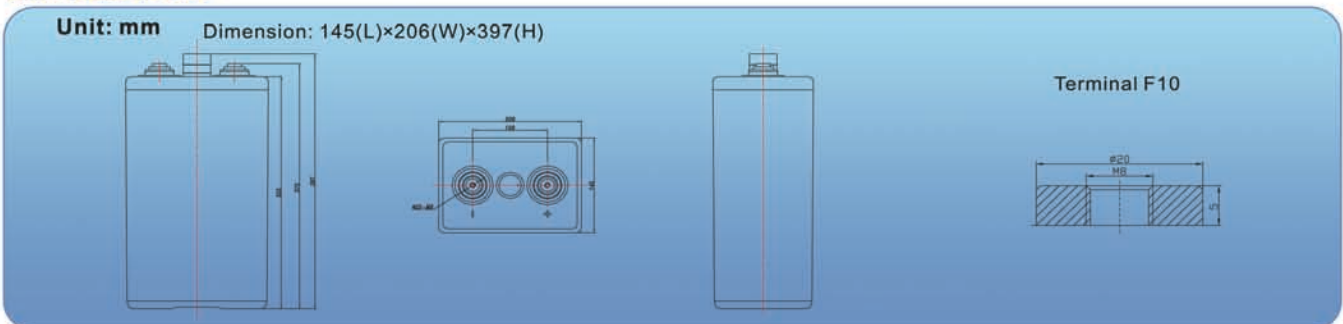
Specification

Voltage Per Unit	2V(single cell)
Capacity	300Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 25 Kg
Max. Discharge Current	1350 A (5 sec)
Internal Resistance	Approx. 0.55 mΩ
Operating Temperature Range	Discharge: -40°C~70°C Charge: 0°C~50°C Storage: -20°C~60°C
Optimal Operating Temperature Range	25°C±5°C
Float charging Voltage	2.25 to 2.3 VDC/unit Average at 25°C
Maximum Charging Current Limit	60 A
Cycle Service	2.37 to 2.40 VDC/unit Average at 25°C
Self Discharge	Self-discharge ratio less than 2% per month at 25°C. Please charge batteries before using.
Terminal	Thread insert & Bolt (F10-M8)
Container Material	A.B.S. (UL94-HB), and UL94-V0 is optional

Applications

- ◆ Solar energy, wind energy
- ◆ Electric power, nuclear power
- ◆ Communication
- ◆ Ship, maritime affairs
- ◆ UPS, medical facilities and emergency lighting
- ◆ Situation with high environmental protection and energy-saving
- ◆ Better safety performance and reliability
- ◆ Designed service life of 20 years

Dimensions



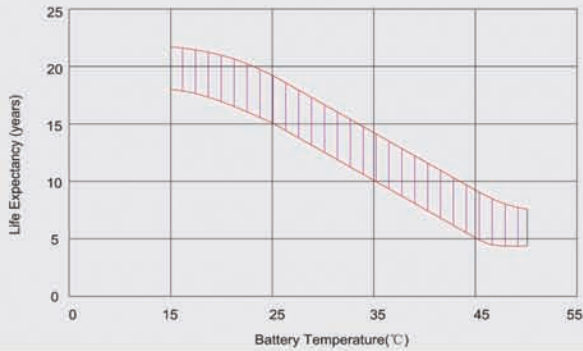
Constant Current Discharge Characteristics: A (25°C)

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90	147.6	117.0	82.50	62.57	51.30	44.33	39.90	31.14	26.70	14.02
1.87	165.0	129.0	88.50	66.35	54.15	46.63	42.30	32.59	27.90	14.65
1.83	189.0	144.0	96.00	70.71	57.00	48.65	43.80	34.05	29.10	15.28
1.80	210.0	156.0	99.60	72.75	58.14	49.80	45.00	34.92	30.00	15.75
1.75	234.0	167.1	104.1	75.66	59.10	51.00	45.90	35.50	30.60	16.07
1.70	258.0	172.5	107.1	77.12	60.14	51.60	46.50	35.79	30.90	16.22
1.65	266.1	183.3	110.7	79.20	60.99	52.20	47.10	36.08	31.20	16.38
1.60	277.5	189.6	114.9	82.50	62.70	53.10	47.70	36.38	31.50	16.54

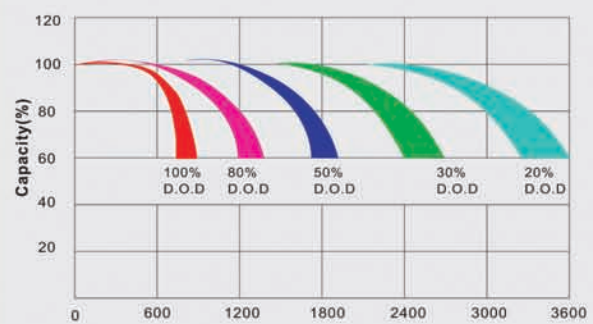
Constant Power Discharge Characteristics : W (25°C)

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90	282.5	224.6	159.5	121.2	100.4	87.30	78.90	62.27	54.42	28.79
1.87	310.8	243.9	169.1	126.9	105.8	91.50	83.40	64.89	56.75	30.02
1.83	348.2	265.9	180.0	133.6	111.0	95.10	86.10	67.22	58.78	31.10
1.80	380.5	283.7	186.0	136.6	113.1	97.20	88.20	68.68	60.24	31.87
1.75	412.8	296.4	192.1	140.8	114.6	99.60	89.70	69.55	61.11	32.33
1.70	442.6	299.4	196.9	143.2	116.4	100.5	90.60	70.13	61.69	32.64
1.65	450.1	312.7	202.3	146.2	117.9	101.4	91.50	70.71	61.98	32.80
1.60	455.6	322.3	207.1	151.1	120.9	102.3	92.10	71.00	62.27	32.95

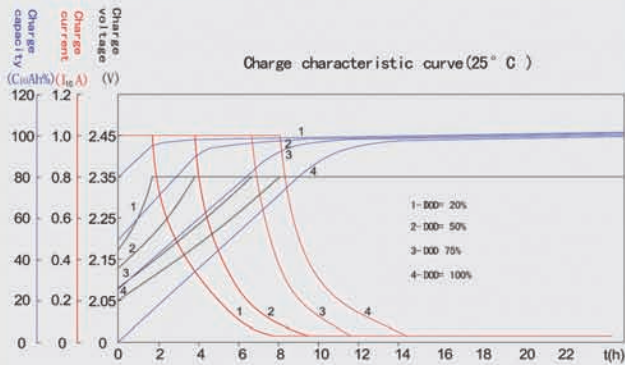
Effect of temperature on long term float life



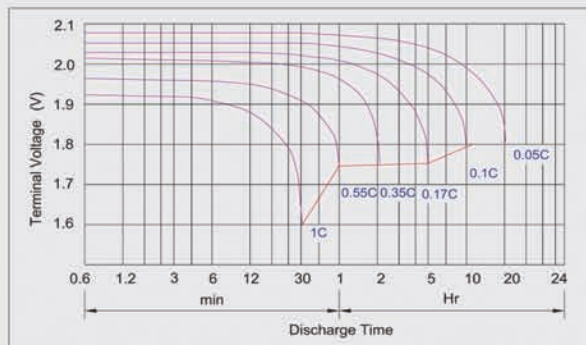
Life characteristic of cycle use



Charge characteristic curve for standby use



Discharge characteristic curve



Long time discharge capacity for solar/wind application

Model	Capacity					
	C24 (Ah)	C48 (Ah)	C72 (Ah)	C100 (Ah)	C120 (Ah)	C240 (Ah)
OPzV2-500	552	613	615	625	642	653

F.V=1.85VPC

Capacity factors vs temperature (OPzV series)

Temperature	-30°C	-20°C	-10°C	0°C	10°C	20°C	25°C	30°C	40°C	45°C	50°C
Capacity	60%	75%	83%	89%	92%	99%	100%	103%	105%	107%	109%

Discharge Current VS. Discharge Voltage

Discharge current	Final voltage (V)
$I_{dis} \leq 0.1I_{10}$	1.90
$0.1I_{10} < I_{dis} \leq I_{10}$	1.85
$I_{10} < I_{dis} \leq 4I_{10}$	1.80
$4I_{10} < I_{dis} \leq 6I_{10}$	1.75
$6I_{10} < I_{dis} \leq 10I_{10}$	1.70
$I_{dis} > 15I_{10}$	1.60

Charge the batteries at least once every six months, if they are stored at 25°C.

Charging Method:

Constant Voltage	-0.2Cx2h+2.35~2.40V,24h,Max. Current 0.2CA
Constant Current	-0.2Cx2h+0.1CAx12h

Maintenance & Cautions

Float Service:

- ※ Every month, recommend inspection every battery voltage.
 - ※ Every three months, recommend equalization charge for one time.
- Equalization charge method:
- Discharge: 40~50% rate capacity discharge.
 - Charge: Max. current 0.2CA, constant voltage 2.35-2.40V/Cell charge 24h.
 - ※ Effect of temperature on float charge voltage: -3mV/°C/Cell.
 - ※ Service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging method.